MacWEEK

12 June 1990 Vol. 4 No. 22 WORKSTATION NEWS

The right writing tools

Mac vs. Windows for word processing

Comparative review of grammar checkers

See ProductWatch, Page 29

Top monitor makers in race to put true-color accelerators on display

NEWS ANALYSIS

By John Battelle and John Webster

Santa Clara, Calif. — As early users of 32-bit QuickDraw video boards can attest, running true color is painfully slow even on fast Macs. Now that the "big four" of the Mac graphics hardware market are either shipping or developing QuickDraw acceleration boards, users have the confusing task of deciding which one is right for them.

SuperMac Technology and Radius Inc. have been shipping QuickDraw accelerators for some time. RasterOps Corp. will join them this month. Both Apple's 8•24 GC and SuperMac's second generation of boards are due next month.

While all four have succeeded in making the display and manipulation of data-intensive 24-bit color images responsive and fluid to the user's eye, each has taken a different approach to the problem.

▶ RasterOps this month shipped the RasterOps Accelerator, a NuBus board that takes a unique angle on QuickDraw acceleration.

Like Radius' implementation, the RasterOps Accelerator does not include its own video display. Instead, it works as a bus master, controlling and accelerating other NuBus video cards via custom software and application-specific integrated circuits (ASICs).

Since it relies on the NuBus, the RasterOps Accelerator shines when

See QuickDraw, Page 8

Adobe's PostScript climbs to Level 2

WYSIWYG color, compression built in

By Carolyn Said

San Jose, Calif. — Fortifying PostScript's position as an industry standard, Adobe Systems Inc. last week unveiled Level 2 of the page-description language at its first developers conference.

When products incorporating PostScript Level 2 hit the market early next year, users will reap such benefits as increased speed, better output quality and true WYSIWYG color, Adobe said.

The company also announced that two industry giants have licensed PostScript: Xerox Corp., known for its high-volume and demand printing, and Eastman Kodak Co., a lead-

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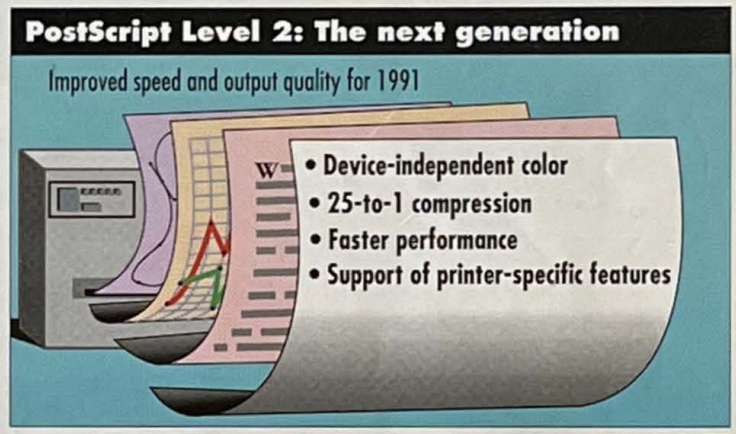
PostScript Level 2: The next generation
Improved speed and output quality for 1991
• Device-independent color
• 25-to-1 compression
• Faster performance
• Support of printer-specific features

KEVIN BERGER

Apple CD drive back-ordered

Price cut, developer discs spur demand

By Raines Cohen

Cupertino, Calif. — Apple's AppleCD SC CD-ROM drive, until recently a slow seller, is back-ordered up to two months.

February's price cut of 25 percent, which lowered the drive's retail price from $1,199 to $899, succeeded beyond Apple's expectations in spurring sales, a company spokeswoman said.

But industry observers said demand is still coming primarily from developers rather than end users. Apple, which reiterated its "aggressive commitment to this technology" when it announced the price cut, is increasingly distributing developer tools, system software and technical information on CD-ROM discs.

Attendees at Apple's Worldwide Developers Conference last month received prerelease copies of System 7.0 on CD-ROM as part of the conference fee but had to pay $100 for the same material on floppy disk and paper.

The Apple strategy, however, has left some developers stewing over the shortage. "It's kind of ridiculous that Apple gives us all this

See CD-ROM, Page 8

Imagesetter competition brings lower prices, better service

By Pamela Pfiffner

San Francisco — With new Mac-based tools bringing high-end publishing capabilities to the desktop and more and more businesses weighing the benefits of bringing typesetting in-house, intense competition in the growing PostScript imagesetter market could bring users better service as well as less-expensive and more-powerful equipment.

The average unit price of imagesetters will decline more than 8 percent yearly, from $57,870 in 1988 to $37,550 in 1993, according to BIS CAP International Inc., the Norwell, Mass.-based market research company.

Virtually every name in the printing industry demonstrated its wares at last month's DRUPA '90 international printing show in West Germany (see MacWEEK, May 1), and no one manufacturer dominates the market.

"There are more competitors

See Imagesetters, Page 9

Gorbachev woos Silicon Valley

By Raines Cohen

San Francisco — Apple's top executives had some of the best seats in the house when Soviet President Mikhail Gorbachev invited business leaders here to venture into the Soviet marketplace.

Apple CEO John Sculley sat at the coveted head table with Gorbachev at a business-leaders luncheon co-sponsored by Apple. Also attending were Apple's Michael Spindler, chief operating officer;

See Gorbachev, Page 8

GERRY GROPP

At the Fairmont Hotel in San Francisco, San Francisco Mayor Art Agnos (left) and Apple CEO John Sculley (right) admire their gift to Soviet President Mikhail Gorbachev, a Macintosh IIcx.

LATE NEWS

Norton deal done, Symantec outlook bright

Cupertino, Calif. — Symantec Corp.'s fortunes are on the rise. The company, which last month shipped MORE 3.0, last week announced that earnings for its first fiscal quarter, ending June 30, will be 10 percent to 20 percent higher than previously expected. Symantec also signed a definitive agreement to acquire utilities maker Peter Norton Computing Inc., pending shareholders' approval in August. □

Agfa adds four DeskWriter font packages

Wilmington, Mass. — Agfa Compugraphic Corp. last week released four new collections of fonts for the DeskWriter, Hewlett-Packard Co.'s popular inkjet printer. The typefaces are based on Compugraphic's Intellifont scaling technology, which is built into the DeskWriter. Each of the four collections will include 12 typefaces and will be priced at $149. □

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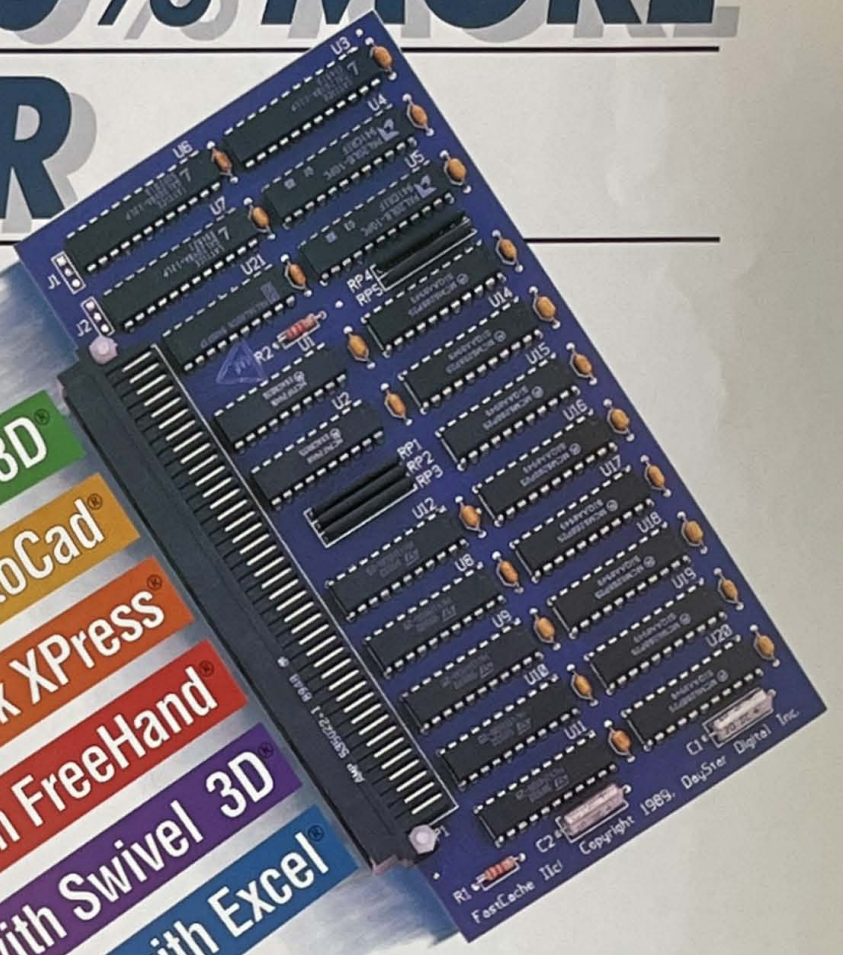

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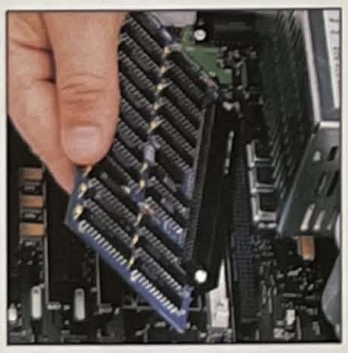

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This ad designed and created exclusively on a Macintosh II with a DayStar 50/030 Accelerator II.

NEW PRICE Call for Details.

MARK RICHARDS

After announcing a $1 million Mac donation to the American Film Institute, Apple CEO John Sculley (right) gave actor and AFI President Charlton Heston (left) a quick demo of multimedia.

Mac gets screen test with AFI gift, ShowBiz Expo appearance

By Connie Guglielmo

Los Angeles — Apple took Hollywood by storm last week, donating more than $1 million worth of Macintosh equipment to the American Film Institute and staking out a sizable chunk of floor space at ShowBiz Expo '90 here.

As AFI trustees — including actor Charlton Heston; producer Gale Ann Hurd; and Jack Valenti, president of the Motion Picture Association of America — looked on, Apple CEO John Sculley announced a "creative alliance" with AFI that will lead to the creation later this year of the AFI/Apple Computer Center for Film and Videomakers.

Open to members of the entertainment industry and AFI (a national trust established in 1967 to promote film, television and video and to train future filmmakers), the center will be used to experiment with Mac technology in video editing, scriptwriting, storyboarding, budgeting, scheduling, and music scoring and editing.

"For us, it is a beginning in an industry that feels very natural to us," Sculley said. "We always knew that there would be a convergence of entertainment and computers. Our hope is that young filmmakers will take these tools and do more creative things than have ever been done before."

Apple reinforced its interest in the entertainment industry at ShowBiz Expo '90, where its booth featured third-party animation, sound and video products. It also announced the second Macintosh in Entertainment show July 21-22 at the Pacific Design Center here.

In addition to IBM Corp., which made its first ShowBiz appearance, several new Mac developers were on the floor, including Doremi Labs Inc. of Covina, Calif., which showed its $10,700 Dawn Digital Audio recorder driven by its Mac software. Brookfield Communications Inc. of Los Angeles said it will release in early 1991 a Mac version of The Studio System, its four-module system for tracking scripts, projects, talent and phone lists.

"We feel that in two years Apple could own the industry," said Daniel Lewis Paul, entertainment marketing manager for Apple. "It might seem like a vertical market, but the film and broadcast industry have a ripple impact on all the businesses that hang off it." □

Menacing Trojan horse apparently reined in

By Henry Norr

Sunnyvale, Calif. — A new and potentially destructive Trojan horse was uploaded to a bulletin-board service here last week, but virus experts said it has not yet spread widely and should be easy to contain.

Called Steroid, the Trojan horse is a Startup document (INIT) that includes a time-bomb mechanism designed to erase any mounted volume when it is booted after July 1. The software purports to accelerate QuickDraw graphics on 9-inch Mac screens.

After Steroid was uploaded to the Mousehole BBS here, a suspicious sysop forwarded it to Apple's Desktop Services group. Engineers there disassembled the software, then posted a warning on AppleLink and the Internet. The initial report said the Trojan was timed to go off on June 6, but that date was later proved erroneous.

Because Trojan horses do not spread by themselves and BBS operators have been alerted about the new problem, virus watchers said few Mac users were likely to be affected.

Developers of leading virus-detection programs, however, said they will upgrade their applications to identify Steroid. □

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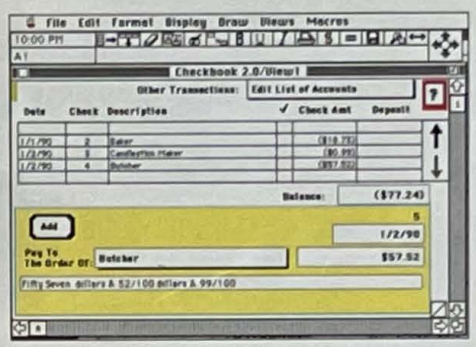

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PCPC CGCII/32

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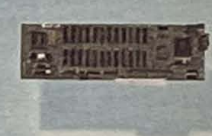
Apple Macintosh II Video Card



PCPC CGCII/8

All major

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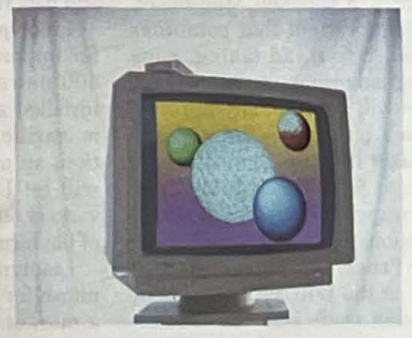

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NEC

Jaminator targets budding rock stars

Trio of Mac pioneers develops toy guitar

By Daniel Farber

Fremont, Calif. — For fledgling rock 'n' rollers who have jammed on their keyboards and mice to make music on the Macintosh, toy maker Worlds of Wonder Inc. has taken the concept one step further.

Jaminator, a digital toy guitar due to hit the stores in time for the Christmas selling season, lets rock 'n' roll wannabes play lead guitar backed up by eight-bit digital tracks from rock 'n' roll classics.

Jaminator was developed for Worlds of Wonder, based here, by a trio of Mac program developers: Ed Bogas, president of San Francisco-based Bogas Productions and an accomplished musician and composer; Steve Capps, an Apple software engineer whose name appears on the credits for the Mac Finder; and Ray DuFlon, a hardware engineer at Radius Inc. of San Jose, Calif.

"The guitar grew out of a Mac music editor and player we wrote for the Mac called Studio Session," Capps said. Subsequently, Bogas Productions created Jam Session, which allows users to play along with musical selections using the Mac keyboard.

The trio crammed the brains of the Jaminator into a custom chip designed by Capps and DuFlon.

JEFF REINKING

Drawing on their experience in developing Mac music programs, Steve Capps, Ray DuFlon and Ed Bogas (left to right) developed Jaminator, a digital toy guitar for budding rock 'n' roll artists.

The guitar will retail for about $120, Capps said. It is played by pressing the strings and the 12 frets and buttons that trigger simulated drum and keyboard riffs.

Similar to Jam Session (distributed by Broderbund Software Inc. of San Rafael, Calif.), software built into the guitar automatically chooses notes and riffs that work with the songs. The guitar, which can be plugged into an amplifier, even has a whammy bar for creating effects.

In addition to the five built-in songs, Worlds of Wonder will offer six ROM cartridges, each with five songs and 195 new guitar riffs to overlay on backgrounds. The cartridges will retail for about $14.

Eventually, the trio plans to create other instruments and network them together for group jams. □

CompuServe offers Navigator bug fix

Columbus, Ohio — Hoping to ensure users a smoother passage through its maze of on-line databases and discussion forums, CompuServe Inc. last week released an update to Navigator, its automated telecommunications software for the Mac.

Version 3.0.1 is designed to remove glitches that have plagued some users of the $79.95 program since a major upgrade in April. According to a list of changes posted by author Mike O'Connor, the maintenance release includes fixes and improvements in 36 areas, including better memory management and more-reliable handling of slow responses from CompuServe's mainframe hosts.

Registered owners can download the new version free of connect charges by typing Go Navigator.

CompuServe Inc. can be reached at 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, Ohio 43220; (614) 457-8600. □

Linotype plans Mac-based turnkey newspaper publishing system

By Carolyn Said

Las Vegas — Printer giant Linotype AG of West Germany is making a strong bid to move the Macintosh from newspaper graphics departments into the newsroom.

At the American Newspaper Publishers Association conference here this month, Linotype will introduce LinoPress, a turnkey Mac-based publishing system that combines editorial, layout, ad taking, page planning and management functions.

"This will substantially improve the Mac's position in the newspaper market because Lino is such a significant force," said Andy Tribute, European editor for Seybold Publications.

LinoPress, which debuted in Europe at the DRUPA international printing trade show in Düsseldorf, West Germany, last month, is scheduled to be available in two phases beginning next year. The editorial component will be available initially, followed by advertising and management components.

The system links Macintoshes over Ethernet via TCP/IP protocols to an AppleTalk Filing Protocol-compatible file server running a relational SQL database.

The system will provide double recording and backup copies of production in progress to guarantee data safety, Linotype said.

"It looked well-thought-out, particularly the structure built around a database. It has good data retrieval and data routing," Tribute said.

Linotype will offer a special path for importing data from its Series 400 newspaper system, which is installed at about 700 newspapers, magazines and printers. In addition, an open system architecture will let LinoPress use data from various other platforms in a variety of file formats.

Linotype said it chose the Macintosh for its ease of use. "Lino did a market study and found much greater acceptance of the Macintosh [than alternative platforms] by commercial printers and publishers. They were 9-to-1 in favor of the Mac vs. the PC," Tribute said.

Linotype's U.S. subsidiary, Linotype Co., is located at 425 Oser Ave., Hauppauge, N.Y. 11788; (516) 434-2727. □

Maple utility promises 85-90% gray-scale image compression

By Connie Guglielmo

Cambridge, Mass. — The latest entrant in the growing market for compression utilities is Maple Picture Publishing, a European import specifically designed for scanned gray-scale images and black-and-white line art.

Now distributed in the United States by Stonehand Inc., the $395 program accepts scanned images in TIFF format; compresses them; and saves them in MPict, a PICT-compatible format for use in other Mac graphics programs.

Gray-scale images, with up to 256 gray levels, can be compressed 85 percent to 90 percent, Stonehand said. A 1.1-Mbyte image, for instance, can be shrunk to 130 Kbytes without visible loss of image quality. Black-and-white line art can be compressed 95 percent to 98 percent.

The compression takes anywhere from 2 Kbytes per second on a Mac Plus to 35 Kbytes per second on a Mac IIfx, the company said.

The software contains image-processing controls for cropping and scaling images as well as adjusting brightness and contrast.

Maple, short for Multiple Application Picture Language Encoding, also contains a feature for archiving compressed images in a database program. Selecting the Encapsulated Maple format automatically produces a small PICT representation of the image, along with the Maple-compressed image.

Available in Europe for the past eight months from its Norwegian developer, Data Nostra A/S, the Maple package includes a Control Panel device (cdev) called Lingua that lets users select a language for menus and dialog boxes. Although 22 are offered (including Thai, Hebrew, Hindi, Urdu, Arabic, Portuguese, Maltese, Chinese and Japanese), only English, Swedish, Danish and Norwegian are available in this version.

Stonehand Inc. is located at 118 Magazine St., Cambridge, Mass. 02139; (617) 868-4656. □

Distributed by Stonehand, Maple Picture Publishing, a $395 compression program for gray-scale images and line art, provides image-editing controls for adjusting gray tones.

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BPA

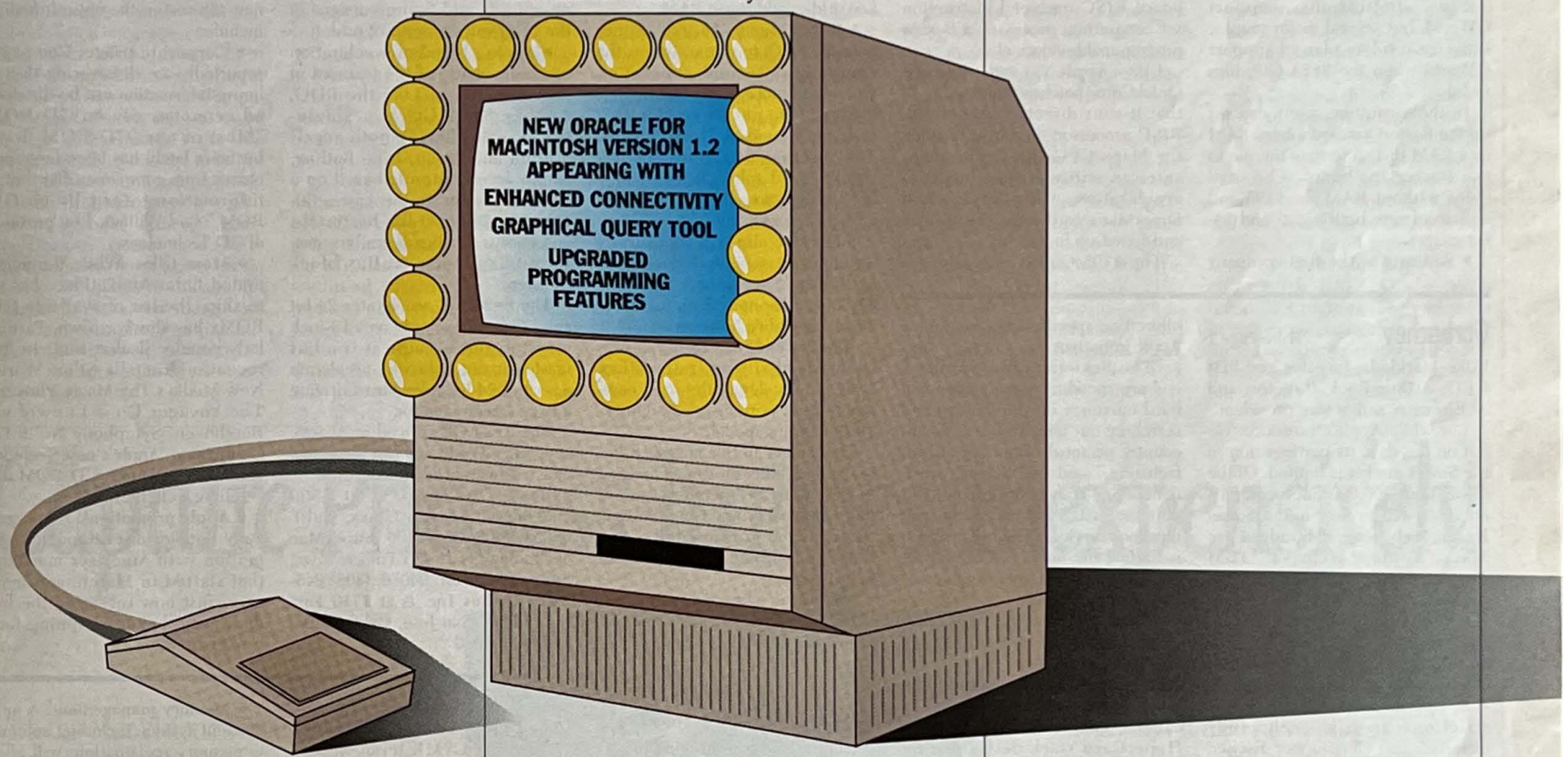
The Mac SQL Sequel

The first SQL database for Macintosh has enhanced connectivity and a new graphical Query Tool.

The first version of ORACLE for Macintosh was a big hit. Industry analysts gave it a thumbs up. Thousands of users gave it their support. And InfoWorld Magazine gave it Product of the Year.

Now Oracle announces ORACLE for Macintosh Version 1.2, with enhancements for both end users and developers.

Improved connectivity options make it even easier to access corporate data on servers, minis and mainframes. Version 1.2 supports virtually any network. Including Async, Apple's MacTCP, Novell's TCPort, Alisa's TSSnet, DCA's MacIRMA 3270 and Tri-Data's Netway.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QuickDraw

From Page 1

used with video cards that support NuBus block transfer, a method of overcoming bottlenecks inherent in the NuBus.

The RasterOps Accelerator includes four SIMM (single in-line memory module) slots, allowing users to add up to 16 Mbytes of RAM to the card. As with Apple's 8•24 GC, the RasterOps board supports GWorld, Apple's standard QuickDraw routines for storing off-screen bit maps. Applications that support GWorld can use RasterOps' on-board RAM to store an entire image, greatly enhancing performance.

Few applications support GWorld, but several major graphic software vendors plan to support GWorld when the 8•24 GC ships in July.

In the meantime, users can set up the RasterOps card's extra RAM as a RAM disk, a feature unique to the RasterOps board. The card ships without RAM for $495 and will accelerate both eight- and 24-bit images.

▶ Radius was the first company in the QuickDraw acceleration market with its QuickColor card. The Radius offering uses an on-board RISC (reduced instruction set computing) processor, a 6-mips programmable Acorn chip.

Like Apple's card, Radius' QuickColor patches QuickDraw so that it runs directly through the RISC processor, thereby offloading the Mac's CPU. But Radius dedicates an entire NuBus board to acceleration, while Apple's and SuperMac's cards combine display and speed-up functions.

The $795 QuickColor also is a bus master that supports NuBus block transfer. It accelerates all bit depths but does not support GWorld or additional RAM.

▶ SuperMac's $4,999 Spectrum/24 PDQ, to ship in July, is the company's second-generation QuickDraw accelerator board.

SuperMac put its acceleration right on its video-display board. The Spectrum/24 PDQ is the only single-board solution for display and acceleration of 24-bit color on a 21-inch screen.

SuperMac also will ship in July an eight-bit accelerated version, called the Spectrum/8 PDQ, for $1,899. It cannot be upgraded to 24-bit capability, however.

Like RasterOps, SuperMac uses customized silicon, rather than RISC, to accelerate the most commonly used portions of the QuickDraw imaging model.

The danger to this approach lies in the possibility of Apple changing the QuickDraw specifications. If that happens, a new Control Panel device (cdev), or possibly a new ROM chip, would have to be sent to board users.

SuperMac's board is not a bus master and, therefore, will not accelerate multiple boards; it does not accommodate additional RAM either, so it does not support Apple's GWorld routines. Company officials said future versions of the PDQ will support GWorld.

▶ Apple's brand of acceleration combines many of the features of its competitors. Like the PDQ, Apple's 8•24 GC is a single-slot board, offering both acceleration and video. Like Radius, Apple acceleration is based on a RISC processor, in this case a 30-MHz Am29000. Like RasterOps and Radius, the board is a bus master and supports NuBus block transfer.

The 8•24 GC accelerates 24-bit color QuickDraw only on a 13-inch monitor. But because it is a bus master, it can indirectly accelerate a second 24-bit color board driving a large screen monitor.

The 8•24 GC, priced at $1,995, supports GWorld and can accommodate 6 Mbytes of additional RAM.

RasterOps Corp. is at 2500 Walsh Ave., Santa Clara, Calif. 95051; (408) 562-4200. SuperMac Technology is at 485 Potrero Ave., Sunnyvale, Calif. 94086; (408) 245-2202. Radius Inc. is at 1710 Fortune Drive, San Jose, Calif. 95131; (408) 434-1010. □

QuickDraw accelerator boards

Board name	Retail price	Ship date	Acceleration method	Bit depths accelerated	Video on-board	Uses NuBus block transfer	Accelerates multiple boards	Hardware supports "GWorld" calls	Supports additional RAM
Apple 8•24 GC	$1,995	July	RISC chip	8-bit, 24-bit**	●	●	●	●	●
SuperMac Spectrum/ 24 PDQ	$4,999	July	Custom silicon	8-bit, 24-bit	●	N/A	N/A		
SuperMac Spectrum/ 8 PDQ	$1,899	July	Custom silicon	8-bit	●	N/A	N/A		
RasterOps Accelerator	$495*	June	Custom silicon	All bit depths		●	●	●	●
Radius QuickColor	$795	Shipping	RISC chip	All bit depths		●	●		

*Does not include RAM ** Does not directly accelerate 24-bit

Gorbachev

From Page 1

Mike Markkula, investor and first CEO; Arthur Rock, director; and Al Eisenstat, senior vice president.

But while Apple's presence was felt on the dais, its participation in the Soviet market is limited. Of the fewer than 300,000 microcomputers estimated to exist in the Soviet Union, only several hundred are Macs. Apple's archrival, IBM Corp., recently sold 13,000 of its personal computers for use in Soviet education.

"We've sold to the Soviet Union on a limited basis to date because of a number of factors, including U.S. Commerce Department restrictions on high-technology exports," said Christopher Escher, Apple spokesman. "Our main goal is to turn the Soviet Union into a long-term business partner."

Gorbachev reportedly told the business leaders in forceful terms that the Soviet Union will remember the companies that are willing to take the risk of coming to its assistance now. Sculley was widely quoted in the local media after the event, saying that Gorbachev's arguments had made a powerful impression on him and other attendees, although he offered no specifics about any new Apple initiatives.

"The Soviets need computers and are spending some amounts of hard currency on purchasing and searching out joint ventures for in-country personal computing manufacturing," said Joel Schatz, president of San Francisco/Moscow Teleport Inc., a U.S./Soviet telecommunications service. "The big problem is finding the market in the Soviet Union capable of spending actual hard currency now."

At the luncheon, San Francisco Mayor Art Agnos presented Gorbachev with a Mac IIcx and a Portable donated by Apple. The machines contained several applications, including City to City, a HyperCard stack developed by TENpointO.

"Diversity and Cooperation," a multimedia presentation developed for the occasion by Animatrix of Palo Alto, Calif., contained 11 Mbytes of scanned photos and music by Herbie Hancock.

Global Warming, a stack created by volunteers, mostly Apple employees, was designed for the Washington, D.C.-based International Foundation for Survival and Development of Humanity, of which Sculley is a board member. □

Soviet President Gorbachev can learn more about global warming when he runs this stack, which was developed for the International Foundation for Survival and Development of Humanity, on his new Mac IIcx.

CD-ROM

From Page 1

great stuff on CD-ROM, but then tells us we have to wait until September to get a drive we order today," one developer said.

Dealers contacted by MacWEEK said third-party drives are selling well to customers unwilling to wait for Apple's. "Our Porta-Drives [from CD Technology Inc. of San Jose, Calif.] have been flying out the door ever since the developers conference. They've hit every [Apple] dealer in the area and are looking for alternatives," said Yugi Honma, manager of ComputerWare in Palo Alto, Calif.

Other factors contributing to the new interest in the optical medium include:

▶ **Corporate usage.** Companies reportedly are discovering that in-house information can be distributed economically on CD-ROM. "Most of our [CD-ROM drive] business lately has been large purchases from companies distributing information internally on CD-ROM," said William Liu, president of CD Technology.

▶ **More titles.** While the much-touted Lotus MarketPlace has yet to ship, the list of available CD-ROMs has slowly grown. Particularly popular, dealers said, are two recent multimedia titles, Warner New Media's The Magic Flute and The Voyager Co.'s Ludwig van Beethoven: Symphony No. 9 CD Companion. Apple's new Technical Information Source CD-ROM also is selling well, they said.

▶ **Apple promotions.** Apple gave away sampler discs through a promotion with MacUser magazine that started in March, and many users just now receiving the free discs have begun shopping for a way to use them. □

PostScript

From Page 1

er in electronic color imaging.

Observers agreed that these moves will help Adobe muscle ahead of the competition posed by inexpensive PostScript clone makers and Microsoft Corp.'s forthcoming TrueImage PDL, which will be coupled with Apple TrueType outline font technology.

"Adobe has done what it had to do to maintain its leadership position," said Jonathan Seybold, president of the Seybold Reports in Malibu, Calif. "PostScript Level 2 is a very impressive package. It's a win all the way around as far as users are concerned."

PostScript Level 2, the first official upgrade in PostScript's five-year history, incorporates the existing language, recently published extensions and several new features:

▶ **Color.** Adobe claims users will be able to print out the exact colors they have specified, regardless of the printer.

Improved algorithms for determining halftone screen angles and frequencies will produce higher-quality color separations, the company said. Adobe's recently published color extensions, which include the CYMK (cyan, yellow, magenta, black) color model and a color image operator, also will be incorporated in PostScript Level 2.

▶ **Compression.** Techniques offering compression at ratios up to 25-to-1 without quality degradation will reduce transmission times and conserve disk space.

▶ **Performance.** "Click to clunk" performance — total time required until a printed page emerges — will be faster, particularly for image files, Adobe said. In addition to increasing the speed of basic PostScript interpretation, the new version will incorporate the fast font-rendering technology developed for Adobe Type Manager, enabling PostScript devices to build characters two to three times faster and improving text quality at small point sizes and low resolutions.

New graphics and text operators first implemented in Display PostScript and new pattern operators and a pattern cache also will help boost Level 2's performance, convenience and functionality, the company said.

▶ **Memory management.** A more efficient system, including automatic memory reclamation, will allow imaging of more-complex graphics and enable users to take advantage of additional printer memory.

▶ **Improved printer support.** Users can take better advantage of their printers' capabilities due to device-independent support for printer-specific features, such as paper trays and paper sizes.

▶ **Forms.** Users will be able to define a base form that stays cached between pages, so only information that changes will need to be interpreted.

▶ **Composite fonts.** Extensions will allow encoding of large character sets, such as those needed for kanji and other character sets.

Users and developers also will benefit from Adobe-written drivers, which the company plans to develop for Mac and IBM PC platforms. Drivers will be able to optimize output for either Level 1 or Level 2 printers and allow existing applications to take advantage of many Level 2 features. Programs that print to Level 1 printers will be able to print to Level 2 printers, Adobe said. □

Imagesetters

From Page 1

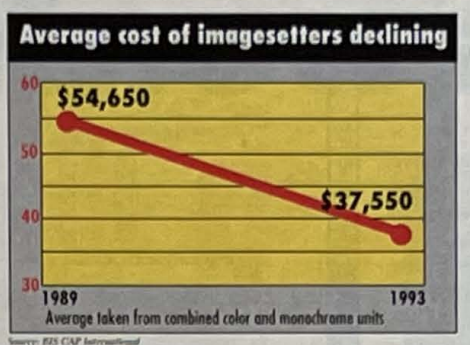
than ever before," said Frank Romano, editor and publisher of TypeWorld in Salem, N.H. "Linotype started out with 100 percent of the market and now everybody's in there."

Scitex America Corp. just entered the desktop arena with a PostScript imagesetter, and Monotype Typography Inc. and Varityper Inc. are scheduled to ship new RIPs (raster image processors) based on Adobe Systems Inc.'s newest and fastest controller with their high-resolution imagesetters.

NEWS ANALYSIS

But much of the attention at DRUPA focused on the battle for supremacy between Agfa Compugraphic of Gevaert, Belgium, and Linotype of Eschborn, West Germany, generally conceded to be the leaders in Mac-based imagesetting.

As the first imagesetter vendor to adopt Adobe's PostScript, Linotype became synonymous with high-resolution output devices for the Mac. "People here still say, 'It's going to Lino,' even though we have Compugraphic equipment," said Mark Miller, typesetting manager at Pantagram Design Services in New York.



Source: BIS CAP International

But rival Agfa, one of the largest suppliers of typesetting systems worldwide, has been putting pressure on Linotype, in part leveraging off its huge installed base of clients who want to replace their aging Compugraphic equipment with new PostScript systems.

"Agfa entered this market three or four years after Linotype did and caught up to second place very quickly," Romano said. "I wouldn't be surprised if [Agfa] takes over the No. 1 position very soon."

Among the products Agfa announced at DRUPA was its SelectSet color PostScript imagesetter that uses Adobe's new Emerald RIP. Based on the R3000 RISC (reduced instruction set computing) chip from MIPS Computer Corp., Emerald is rated to be up to seven times faster than Adobe's original 68000-series RIP, the 68020-based Atlas (see MacWEEK, April 17 and May 1). The SelectSet also includes new, more-precise algorithms for generating traditional screen angles for color separations.

Linotype, on the other hand, has been more cautious in its approach to the new RISC technology. At DRUPA, it introduced two new imagesetters that use its latest RIP 30, a processor based on the older Motorola 68030 chip and specially optimized screen angles.

Linotype Co. President David Dinin said the company chose not to come out with an Emerald-based RIP because Linotype's benchmark tests showed no real performance difference between Linotype's RIP 30 and the Emerald RIP.

In addition to faster RIPs and more-accurate imagesetters, both vendors showed color pre-press systems that include software for color correction and separations, as well as scanners and low-resolution proofing devices.

"The people from our organization who went to DRUPA had the feeling that the story wasn't the Emerald RIPs," said Jonathan Seybold, president of the Seybold Reports in Malibu, Calif. "The real story was the proliferation of color systems from the monochrome publishing vendors."

Bill Clinton, a BIS CAP analyst, agreed that from now on, color pre-press capabilities and products will be an important factor in the imagesetter market. "Issues will now focus on the color rendition that occurs on each device," he said.

"In the past, in the traditional typesetting market, Agfa Compugraphic has gone after high-performance machines, while Linotype positioned itself as having mainstream products," said James Cavuoto, editor and publisher of the Micro Publishing Report in Torrance, Calif. "Now, with its lead in PostScript, Linotype is saying it's going after the high end, too."

As distinctions between products become less obvious, purchasing decisions will have to be based on other factors.

"Service is the key issue," Cavuoto said. "How reliable is the company? How much support do you get? How good is the service?"

Agfa Compugraphic has taken advantage of such concerns in its campaign to catch Linotype in the PostScript market. "I'm an ex-Linotype employee, and I had a bias toward Lino," said Jim Lawdon of Business Link Communications Inc., a New York service bureau. "But Lino feels it's king of the hill. With Agfa, the pricing is good, but it's also very aggressive about service and support.

"When I call for service, they're here in the blink of an eye. Lino schedules me for an appointment," he said.

Acknowledging the growing importance of support issues, both market leaders are promoting their service programs, Linotype's LinoCare and Agfa's AgfaCare.

In the future, Cavuoto said, imagesetters will serve two different but parallel markets, for service bureaus and color-separation houses on the one hand and corporate installations on the other. "All monochrome work will be done in-house," Cavuoto said.

Service bureaus and color houses will need high-resolution, tight-registration machines, which are likely to remain priced at more than $50,000. In-house systems are more likely to use 1,200-dpi, 120-line-per-screen monochrome machines that cost less than $20,000, according to Cavuoto.

"You still need a professional level of talent" for high-quality color work, BIS CAP's Clinton noted. But there is plenty of room in the corporate market for "good-enough" color printers to proof documents before sending them out to a service bureau, he said. □

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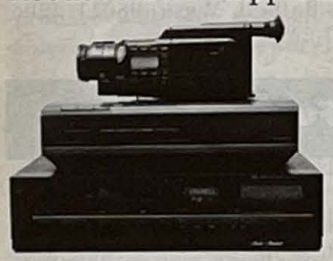

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if:X Forms has 'graphics intelligence'

Softview program eases form changes

By Daniel Farber

Oxnard, Calif. — After more than two years of development, Softview Inc. is preparing to release the first in a new family of forms products.

Due at the end of this month, if:X Forms Designer incorporates an innovative technology called graphics intelligence, according to Susan Morgan, company founder.

Graphics intelligence makes it possible to restructure a form without having to rearrange elements, she said. When a user inserts, deletes, moves or resizes objects, if:X automatically adjusts the dimensions of surrounding elements.

The $279 program offers a variety of display modes and magnification options. Small text, for example, can be viewed at larger sizes without affecting printing size. Gray shades and patterns can be overlaid on cells, but the program does not support color.

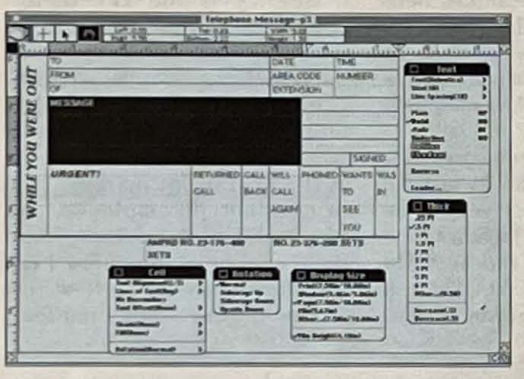
Users can control several settings for text, including leading, offset and rotation in 90-degree increments. Graphics from painting and drawing programs can be added, and check boxes can be inserted in forms.

"I was impressed with the program's cell-creation capabilities," said beta-tester Peter Saybolt, a Baltimore consultant. "The fact that you can insert cells and move text and graphics around is a major advantage, but the speed needs to be improved before they ship."

An upgrade due early next year will support Encapsulated PostScript, allow forms to be scanned in and add print-merge capabilities, Morgan said. A version for Windows 3.0 is also planned for next year, as well as fill-in modules that support calculated fields and SQL database links.

Softview also announced a series of interactive templates for the Mac and Windows 3.0. Like the company's flagship product, MacInTax, the templates include automatic calculation, customizable pop-up lists, and linking of fields and forms. Business Expense Reports, Expense Reports and GSA Expense Reports are slated to ship this month for $79 each. Home Loan Documents and Quarterly Payroll Tax Documents are due in July for $99 each.

Softview is at 1721 Pacific Ave., Suite 100, Oxnard, Calif. 93033; (805) 385-5000. □



Softview's if:X Forms Designer automatically adjusts the appropriate cells when changes are made that affect the dimensions of a form. The program also supports tear-off menus.

Capture upgrade out of the bag

Agoura Hills, Calif. — Mainstay this month upgraded Capture, its popular screen-snapshot utility. The $79.95 program allows users to copy color or monochrome screens to the Clipboard or into a PICT-format file on disk.

New options in Version 3.0 include capture of the cursor and automatic scaling of captured images to a reduction factor specified by the user. The program has been rewritten, the company said, to enhance compatibility with recently introduced and future Mac models and system software versions.

Registered users can upgrade for $15 or for free if they purchased Capture 2.0 after April 15.

Mainstay is located at 5311-B Derry Ave., Agoura Hills, Calif. 91301; (818) 991-6540. □

Modem for the road

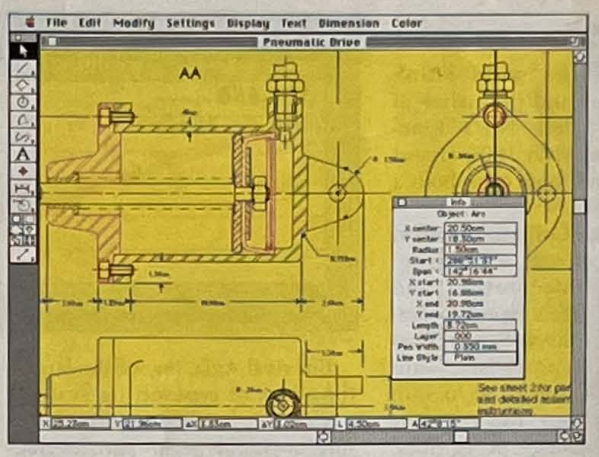
Tustin, Calif. — Portable-packing, fax-sending users on the go may want to take a look at the Calling Card Mini Fax, a new modem from CMS Enhancements Inc.

Available now for $349, the pocket-size modem combines a 4,800-bps send-only fax modem with a 2,400-bps Hayes-compatible data modem.

To conserve battery power, Calling Card can turn itself off automatically when exiting from a communications program. The modem also can run from an external power supply.

Calling Card comes with QuickLink II Fax, a $149 software program from Smith Micro Software Inc. of Huntington Beach, Calif.

CMS Enhancements Inc. is at 1372 Valencia Ave., Tustin, Calif. 92680; (714) 259-9555. □



With the Mac version of Generic CADD, users can edit objects with associative dimensioning, add color and have ready access to floating Info Palettes that describe selected objects (lower right corner).

Generic CADD boasts drafting features, drawing-app ease of use

By Rochelle Garner

Bothell, Wash. — With the introduction this week of a Macintosh version of Generic CADD, Generic Software Inc. will increase the CAD capabilities of its Mac offerings to include color, associative dimensioning and drafting tools.

Scheduled to ship in mid-July, the general-purpose 2-D program is designed for users who need to create production drawings and want the ease of use inherent in drawing applications. At $595, Generic CADD is $300 less than its closest competitor, Claris CAD 2.0, which is also due this summer.

The company said it will continue to support Generic CADD Level 1, a $150 program for the Mac that does not offer the new package's full-blown CAD features, such as dimensioning.

The Mac version of Generic CADD, which fully adheres to the Mac interface, lets users edit objects by changing dimensions in status boxes always present at the bottom of the screen. The program's associative dimensioning feature automatically updates the object to reflect those changes.

The program also provides:

- A palette of 80 predefined colors.
- Built-in PICT and Encapsulated PostScript compatibility, as well as compatibility with Drawing Interchange Format (DXF) Release 10 through an included DXF translator. The Mac version also can share files with Generic's DOS-based software.
- Drafting tools, including snap-to options; filters for selecting objects by common criteria; floating Info Palettes that describe selected objects; and procedures for returning quickly to different user-named views, or layers.

Generic Software Inc. is located at 11911 North Creek Parkway S., Bothell, Wash. 98011; (206) 487-2233. □

Construction Kit helps build designer genes

DNA manipulator garners kudos

By Henry Norr

West Lebanon, N.H. — Textco Inc. this month will ship an enhanced version of The Gene Construction Kit, a DNA manipulation and drawing tool that has won acclaim from molecular biologists since its initial release this spring.

"The real achievement is that it works the way a biologist would," said Will Gilbert, director of computing at the Whitehead Institute, a genetic research center affiliated with the Massachusetts Institute of Technology in Cambridge. "Everyone in the field knew what was needed. Now we have everything we asked for."

Developed over three years by a team led by Robert Gross, a professor of biology at Dartmouth College in Hanover, N.H., the $895 program lets users represent DNA sequences graphically or as text. Segments can be cut and pasted in either mode to help scientists plan, manage and report on genetic engineering projects.

Labels, comments and arrows can be added to identify regions of interest, and a zoom function lets users view the construct at any level. A feature called Chronography keeps track of each segment's history and allows users to examine any generation at any time.

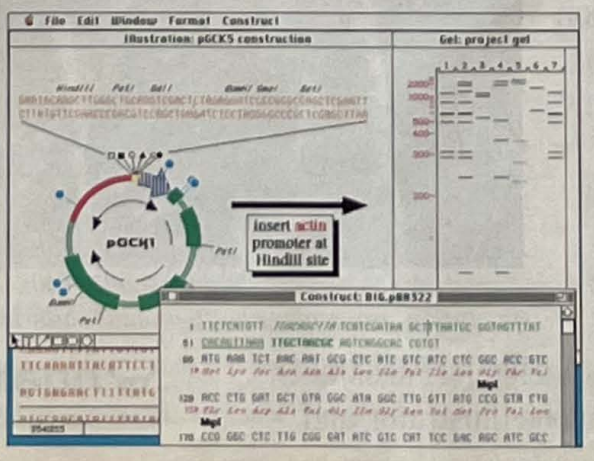
Doug Nomura, a scientist at the DNAX Research Institute in Palo Alto, Calif., said the Textco program "has brought desktop publishing into the molecular biologist's world." Circular plasmid maps are widely used in the field, he said, for presentations, submissions to journals and documentation of shared DNA samples.

"A few years ago we spent well into six figures annually paying graphic artists for these things. Now we can just read in the data in the standard ASCII formats, and the program automatically creates the map."

The new release due this month, Version 1.02, will add more flexibility in modifying previously defined regions, bug fixes and other enhancements, Gross said. It also will support File Searching Module, a $350 add-on that will enable users to search across multiple files on a variety of attributes.

The Gene Construction Kit, which is copy-protected, is available to academic users for $495. A two-disk demo version is $5.

Textco Inc. is located at 27 Gilson Road, West Lebanon, N.H. 03784; (603) 643-1471. □



Textco's The Gene Construction Kit displays DNA sequences in graphical or text format. Users can cut and paste segments to plan genetic engineering projects and add labels and arrows for presentation and publication.

For the Record

The One Minute Manager in the June 5 issue incorrectly listed the date of the Interactive Multimedia Workshop sponsored by the San Francisco-based Center for Electronic Arts. The correct schedule is July 9-20. The Center for Electronic Arts can be reached at (415) 882-7063.

June 5's MacWEEK also incorrectly stated that Shiva Corp. has promised TCP/IP protocol support for its FastPath router. FastPath, which Shiva recently acquired from Novell Inc., already supports TCP/IP. Shiva has promised to add support for TCP/IP protocols to its $2,399 EtherGate serial sharing and Ethernet-to-LocalTalk router product.

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Product Support Manager for PC-based systems,
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William J. Suarez,
Manager of Support and Operations,
Avatar Corp., Hopkinton, MA

"With Carbon Copy Mac, network administrators can manage network resources, and users can easily transfer files from remote sites. The program worked flawlessly."
PC Week, April 16, 1990

"Carbon Copy Mac is designed for such applications as training, network management and troubleshooting, as well as remote access to office resources."
MacWeek, April 10, 1990

"Carbon Copy Mac is easier to use, it's got better file transfer and it draws the screen a lot faster."
Manoj Doshi,
Aetna Life Insurance Co.,
as quoted in MacWeek, April 10, 1990

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We interviewed over 100 people at Macworld. Here's how they plan to use Carbon Copy Mac remote control software:

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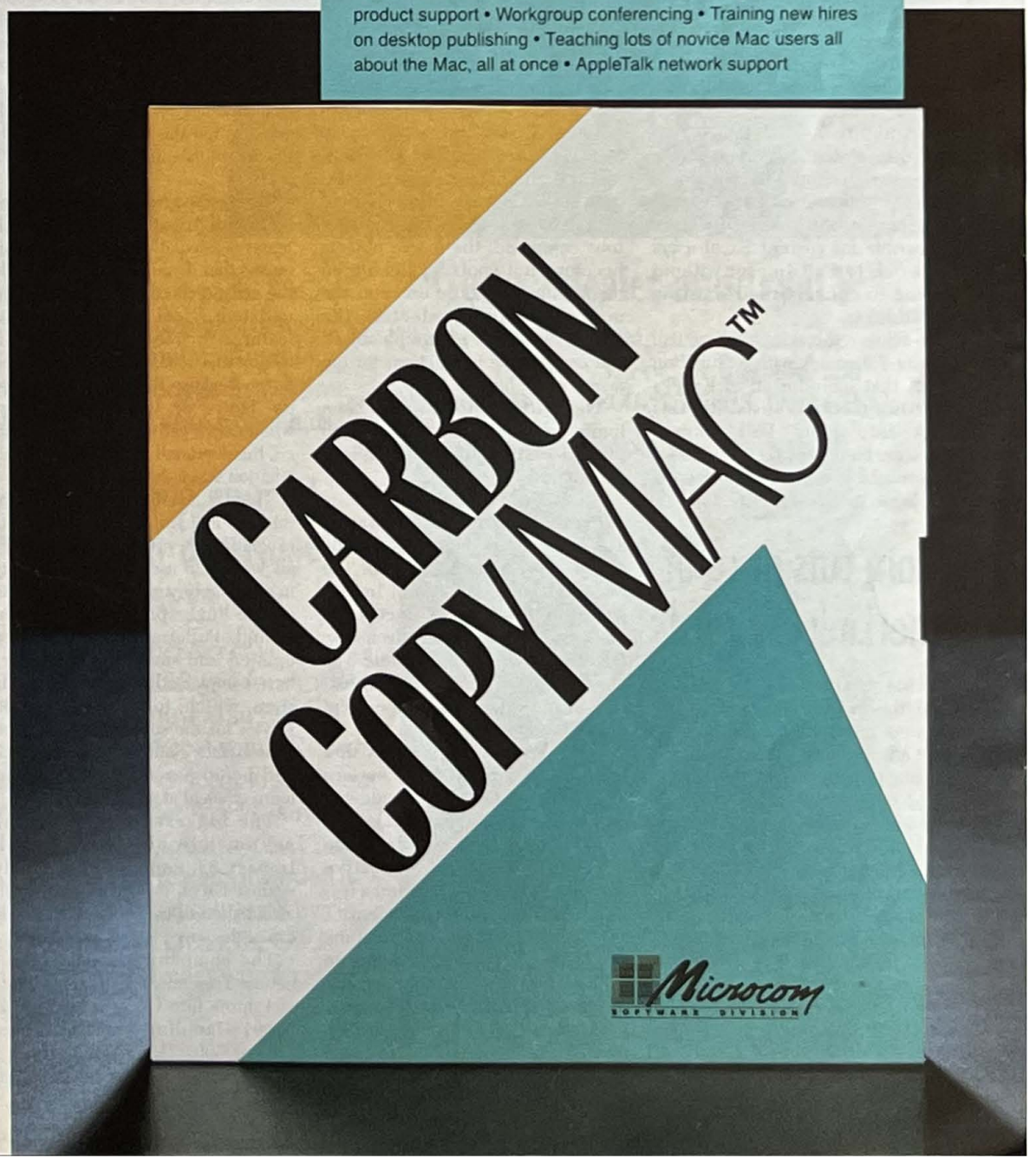


Full Impact 2.0 gets more clout

Spreadsheet can now read, write MS Excel

By Clay Andres

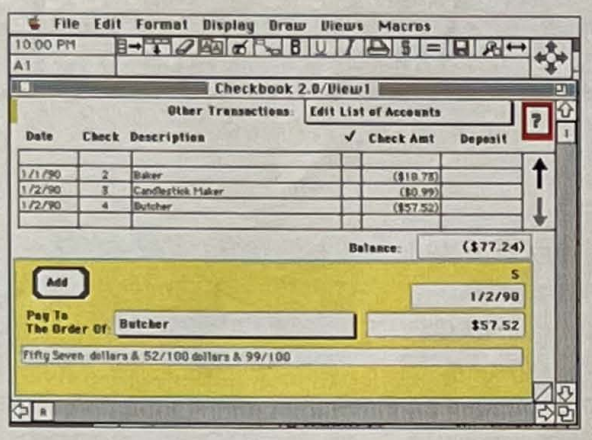
Since Ashton-Tate Corp. introduced Full Impact two years ago, it has been full of promise but short on impact. Despite innovative features and presentation capabilities, the program has taken no more than a nibble out of Microsoft Excel's enormous share of the Macintosh spreadsheet market.

When Full Impact 2.0 ships at the end of this month, it will be capable of reading and writing Excel's proprietary file format. This means that Full Impact 2.0 owners will get access to the vast library of existing Excel files and templates and will be able to work on joint projects with Excel users.

In marketing terms, it will help Ashton-Tate stand up to Informix Software Inc., which recently added similar capabilities to its Wingz spreadsheet, the other leading challenger to Excel.

Previously, many users may have preferred the graphics features of Full Impact (or Wingz) but continued to use Excel to maintain compatibility. Ashton-Tate is betting that, as that issue fades, new buyers will find Full Impact's features superior to Excel's. And file compatibility also will make it possible for current Excel users to switch to Full Impact without having to convert their existing spreadsheets.

To achieve this compatibility, Full Impact 2.0 comes with a "function pack" that includes all of Excel's built-in functions. Installing this pack into your Full Impact Resource file makes the Excel functions available every time you open Full Impact.



This checkbook application, written in Full Impact 2.0, has buttons that are actually objects linked to macros. Clicking on the Add button executes a macro that posts a new check to the register.

Third-party developers. The new Function Pack Installer reveals the second part of Ashton-Tate's strategy to bolster Full Impact: maximum user customization. And for those users who will never write their own macros, Ashton-Tate is redoubling its efforts to encourage third-party development of macros and function packs.

The key to attracting developers is Full Impact's development environment. Extensions have been added to FullTalk, the program's macro language, to allow the creation of several special-purpose tools. These include close-down macros that execute automatically when you quit Full Impact, a Duplicate Into command to create protected macros that can be run but not edited, and Macro Buttons to attach macros to Full Impact objects.

Any drawn object, chart or pasted drawing can have a macro attached to it. By toggling the Enable Buttons command, the macro objects become "hot spots." Clicking on them with the mouse executes the macro instead of selecting the object. By using a paragraph object, you can include instructions for the macro in the button.

The macro editor also has been improved with the addition of word processor-style Find and Replace commands.

Presentation enhancements. The capability to put charts directly in the spreadsheet is one of the major advantages that Full Impact and Wingz have over Excel. But Wingz's 3-D charts have given it an edge over Full Impact. While 3-D charts may have limited usefulness in practice, they have great marketing appeal.

Full Impact 2.0 addresses that issue, adding 3-D bar and surface charts plus 3-D views (shadowed depth effects) for bar, stacked bar and pie charts. The 3-D charts can be rotated and the perspective changed by grabbing handles, a feature Wingz has yet to implement.

Full Impact 2.0 also can combine two charts to create a third one, an overlay chart. You can join two sets of data or even two chart types. The overlay chart is functionally independent of its creators and updates automatically to reflect changes in the data.

To help customize data for presentations, Full Impact 2.0 includes a custom data formats option. Excel has always had this capability, but Ashton-Tate has added more flexibility. You can format text as well as numbers and also do simple calculations within the format. For instance, you can format cells to permit percentages without decimals, to display the % symbol and to calculate the correct decimal value for formulas in other cells.

Full Impact 1.0 lets users create borders around cells with its drawing tools, but objects did not resize when cell sizes were changed. Version 2.0 adds a Borders command that attaches rectangles to cells. If you change the column width, the border adjusts to fit.

Performance: The bottom line. Full Impact 2.0 includes intelligent recalculation algorithms. This means that if you change a cell, only the cells affected by the change are updated. Excel 2.2 also uses this feature. For most spreadsheets, it means that recalculations are much faster, because there is less work to do. However, in the worst case, when every cell needs to be updated, the overhead of intelligent recalculation slows down performance.

There is a similar give and take in the way Full Impact saves files. The program uses virtual memory, which allows you to use your disk capacity in addition to your Mac's memory to create huge spreadsheets. Even though Full Impact files can be opened and saved quickly, users have complained about the large file sizes, which, for example, are 30 Kbytes for the smallest spreadsheet. Ashton-Tate claims that Version 2.0 will be 35 percent to 40 percent more efficient at using disk space.

The biggest question facing Ashton-Tate now is: Can Full Impact 2.0 compete effectively against Excel, or is Excel too well-established to be knocked from the top of the spreadsheet mountain?

The company has not yet announced pricing or upgrade policies.

Ashton-Tate Corp. is located at 20101 Hamilton Ave., Torrance, Calif. 90509; (213) 329-8000. □

3Com cuts price of EtherLink/SE card

Santa Clara, Calif. — 3Com Corp. this month announced a $100 price cut on its EtherLink/SE Ethernet adapter for the Macintosh SE, bringing the price down to $495.

The company also said that the card will soon be compliant with AppleTalk Phase 2, Apple's most recent version of the Mac's built-in networking scheme. In August, 3Com said, it will ship with a new EtherLink/SE driver for Phase 2 networks. Current EtherLink/SE users will be able to upgrade free.

3Com Corp. is located at 3165 Kifer Road, Santa Clara, Calif. 95052; (408) 562-6400. □

News BRIEFS

Hewlett-Packard launches cartridge recycling program

Palo Alto, Calif. — In an effort to reduce the volume of plastics entering landfills, Hewlett-Packard Co. last month launched a pilot recycling program for toner cartridges used in its LaserJet printers.

Under the program, which is in effect now in 11 Western U.S. states as well as Germany and Switzerland, customers can pick up a recycling kit, including instructions and a prepaid UPS return label, from HP dealers. Returned cartridges will be disassembled. Some non-critical components will be removed and reused; the aluminum drum and other parts will be melted down and recycled as raw materials.

HP said its cartridge vendor will donate $1, to be divided between the National Wildlife Federation and The Nature Conservancy, for each cartridge returned.

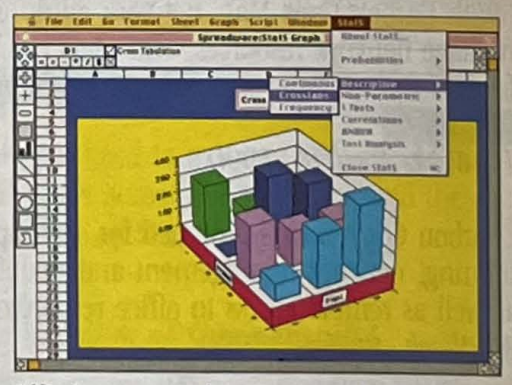
In 1991, HP said, it expects to expand the program to the rest of the United States and to Canada.

Wingz gets statistics lesson from Spreadware add-on

Hayward, Calif. — Spreadware last month began shipping an add-on for Wingz that promises to turn the Informix Software spreadsheet into a powerful statistical application.

Called Spreadware Statistics Menu, or StatS, the program adds a new menu to the Wingz menu bar. Functions include calculation of probabilities for z, F, t and chi-square distributions; descriptive statistics for frequencies and continuous and cross-tabbed data; non-parametric statistics; t-tests for independent and correlated data; and several kinds of ANOVA.

StatS was written by Ed Asmus, music professor at the University of Utah in Salt Lake City. Asmus developed it for students in his musical behavior courses who are not trained in statistics. "There are lots of programs that do all kinds of calculations, but I needed something that would use a familiar metaphor and help them understand the relationships," he said.



Adding its own commands to Wingz's menu bar, Spreadware's StatS offers a variety of statistical functions that can be used in combination with the spreadsheet's graphical capabilities.

Users need to highlight only the spreadsheet data to be analyzed, select where the results should be placed and choose a function from the StatS menu, Spreadware said. The company, which markets add-ons for leading Mac spreadsheets, will offer StatS at an introductory price of $89 until Oct. 1.

Spreadware can be reached at P.O. Box 4574, Hayward, Calif. 94540; (415) 794-4388.

New TOPS interface card patches IBM PS/2s into AppleTalk

Alameda, Calif. — TOPS Corp. last month announced shipment of FlashCard MC, a Micro Channel bus interface card that integrates IBM PS/2s and compatibles into AppleTalk networks. FlashCard MC implements TOPS' proprietary FlashTalk protocols, which accelerate Apple's LocalTalk from its standard 230 Kbps to 770 Kbps.

FlashCard MC is available now for $329. TOPS also offers FlashCard, a $239 network interface card for IBM PCs, XTs, ATs and compatibles.

TOPS is at 950 Marina Village Parkway, Alameda, Calif. 94501; (415) 769-9669.

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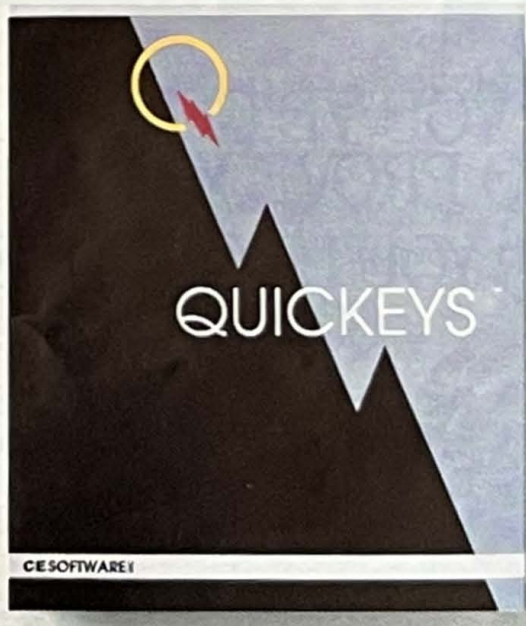

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DOS coprocessor card shrinks to one slot

Orange Micro ships new Mac286 version

By Henry Norr

Anaheim, Calif. — Compared with the number of IBM PC users now clamoring to cover up MS-DOS with a Maclike interface, Macintosh owners who want to see DOS prompts on their machines are few and far between. But new software and hardware from Orange Micro Inc. promises to ease the pain for that minority.

The company last month began shipping a new version of its Mac286 coprocessor for the Mac II family. While the original version, released more than two years ago, used two NuBus slots, the new design, based on surface-mount technology, requires only a single slot.

The board, which is based on an 80286 (the processor that drives IBM PC ATs and compatibles) running at 8 MHz, is priced at $1,599; the older two-board version is still available at a reduced price of $1,499, according to Orange Micro President Arthur F. Scotten. After contacting the company for authorization, U.S. and Canadian owners of the two-board product may trade it in for the new version for $699; for users elsewhere, the cost is $749.

In April, Orange Micro began shipping Version 3.0 of its software for both Mac286 and Mac86, its 8086-based DOS coprocessor for the Mac SE. Enhancements in the new version include support for Apple's SuperDrive, which the coprocessors can now read from and write to. The boards also can boot applications from the SuperDrive. Users can select internal or external SuperDrives or 5.25-inch drives as DOS Drive A.

In addition, Version 3.0 of the software supports up to 4 Mbytes of extended memory. The card ships with 1 Mbyte of RAM, but users can boost the memory by installing SIMMs (single in-line memory modules). Because Mac286 has its own memory and processor that run independently of the Mac's, it can carry out such tasks as recalculation of a Lotus 1-2-3 spreadsheet in the background at AT speeds without interfering with the performance of any active Macintosh applications, the company said.

To take advantage of Version 3.0, owners of earlier Mac286 boards must return them to Orange Micro for hardware modifications. The upgrade is $199 for U.S. and Canadian owners and $249 for others. Mac86 owners need only the new software, which is available for $65 with return of the original program disk. The upgrades are free to customers who bought either product after Feb. 26.

Orange Micro's coprocessors have been somewhat overshadowed in recent years by SoftPC, the $399 software-only DOS emulator marketed by Insignia Solutions Inc. of Sunnyvale, Calif. Insignia recently introduced a $199 module that adds

See Orange Micro, Page 18

Univation challenges Orange Micro with lower-cost Mac/DOS 286sx

By Henry Norr

Milpitas, Calif. — Although Orange Micro Inc.'s Macintosh coprocessor cards are the best-known entrants in the field, they are not the only ones.

Univation Inc., an 8-year-old vendor specializing in networking hardware and software for IBM PCs and compatibles, earlier this year released another MS-DOS coprocessor for the Mac II family.

Called the Mac/DOS 286sx, the Univation card fills just one NuBus slot and supports the Apple SuperDrive. At $1,295, it is $300 less expensive than Orange Micro's Mac286; the 80286 processor on the Mac/DOS 286sx, running at 12 MHz, is faster than the Mac286's 8-MHz clock rate.

Unlike Orange Micro's offering, the Univation card has built-in serial and parallel ports that can be used to connect to printers or, via an external adapter, to Ethernet or token-ring networks.

On the other hand, the Mac/DOS 286sx, which is based on technology acquired from the now-defunct PerfecTEK Corp., has no support for RAM beyond the 1 Mbyte that ships on the coprocessor board.

Macamerica, the San Jose, Calif.-based distributor, has exclusive retail-channel rights to the Mac/DOS 286sx, Univation said, but Falcon Microsystems Inc. of Landover, Md., Apple's chief reseller for the federal market, also carries the card.

Univation Inc. is located at 513 Valley Way, Milpitas, Calif. 95035; (408) 263-1200. □

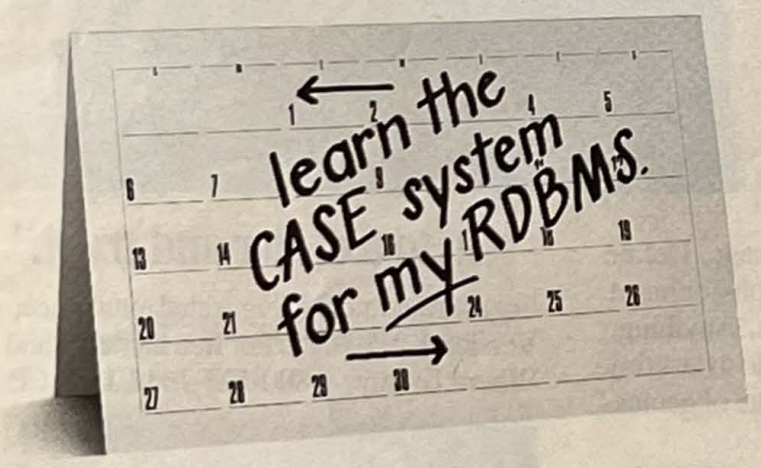
Wizard brings DOS files to desktop

Sunnyvale, Calif. — Insignia Solutions next month will release a new Startup document (INIT) that will let users of Apple's SuperDrive, other DOS-compatible drives and Insignia's own SoftPC products see their DOS files on the Mac desktop.

While DOS Mounter from Dayna Communications Inc. of Salt Lake City already offers similar capabilities by creating a Mac Desktop file on DOS disks, Insignia's product, code-named Wizard, will create the file in memory, making Wizard faster than DOS Mounter and enabling it to work with full and locked disks, Insignia said.

The product will have an introductory price of $89.95, which will rise to $129.95 later this year.

Insignia Solutions Inc. is located at 254 San Geronimo Way, Sunnyvale, Calif. 94086; (408) 522-7600. □



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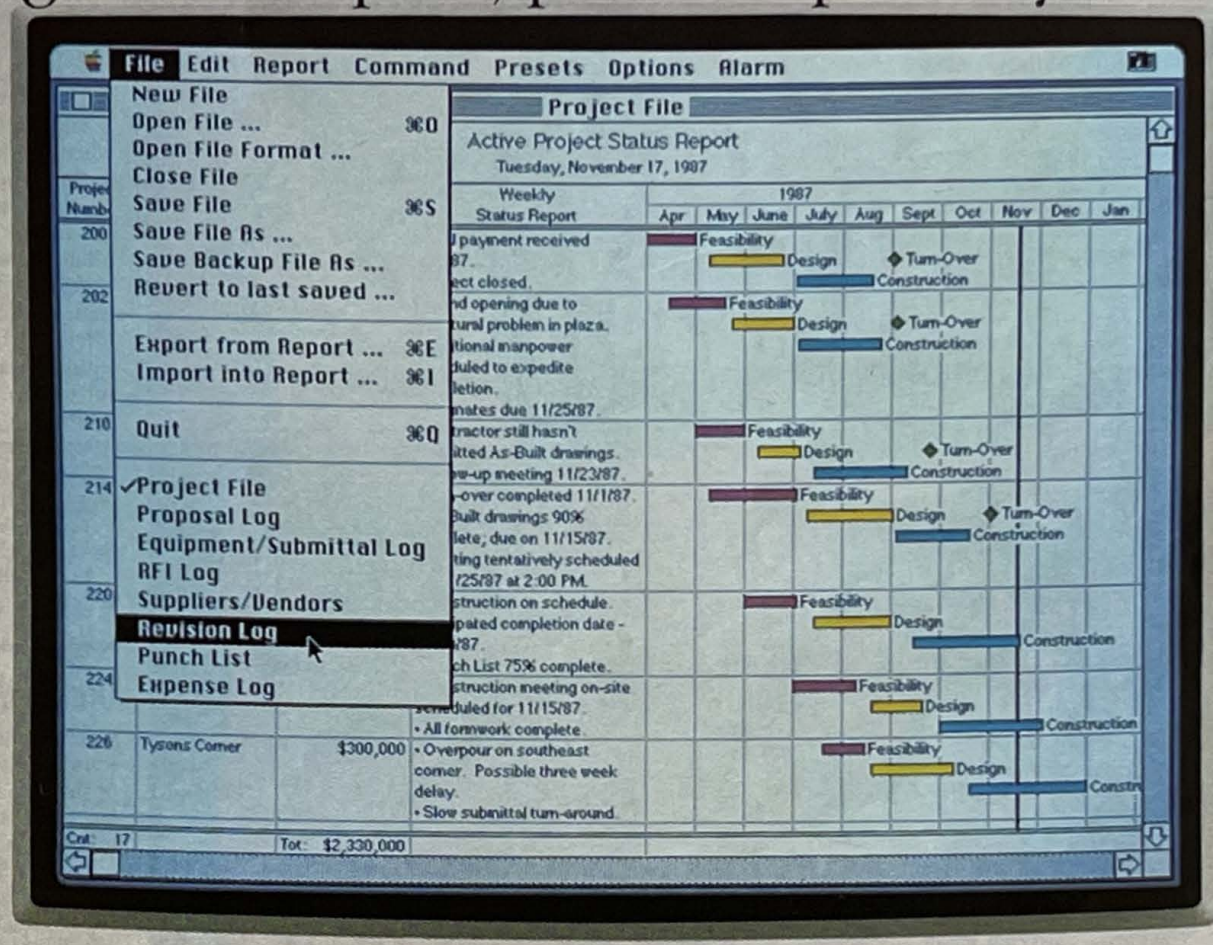

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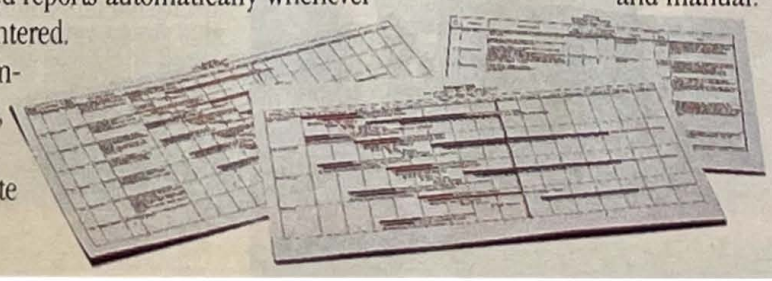

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How to get Zmac

Zmac, Ziff-Davis Publishing Co.'s on-line companion to its two Macintosh publications, features the MacWEEK News Beat, MacUser Power Tools, Editorial Discussion Forums and Reference sections, as well as a Buyer's Guide.

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'Minor' enhancements in Microsoft Word 4.0B

By Henry Norr

Redmond, Wash. — Microsoft Corp.'s public relations machine, perhaps preoccupied with Windows 3.0, didn't bother to make an announcement, but last month the company released an update to the word processor it says is used by some 70 percent of all Mac owners.

Described as a "minor maintenance release," Version 4.0B of Microsoft Word is available free of charge to registered owners who need the enhancements it offers.

The new release enables the Fractional Widths option in Word's Page Setup dialog when the ImageWriter driver is selected, as well as when laser printers are used. Selecting this option will help ImageWriter owners get better output when using Word with Adobe Type Manager.

Version 4.0B also improves compatibility with the Mac IIci and, according to a Microsoft customer service representative, with the Mac IIfx. In addition, the new release solves several problems with large screens, multiple-monitor configurations and 24-bit color displays; with desk accessories that use multiple windows; and with dialog-box drop-down lists that extend below the window.

Registered owners can request Word 4.0B by calling (206) 882-8088.

Microsoft Corp. is located at 1 Microsoft Way, Redmond, Wash. 98052-6399. □

Orange Micro

From Page 16

several enhancements, including EGA graphics, expanded memory support, and emulation of the '286 and the '287 math chip. Mac286 has a socket for a '287 but supports only CGA or monochrome graphics.

But Mac286, Scotten said, offers serious users a variety of performance and compatibility advantages. The board, with a '287 installed, takes only 17 seconds to recalculate a Lotus 1-2-3 spreadsheet that requires 54 seconds under SoftPC EGA/AT, according to benchmark results distributed by Orange Micro; retrieving a WordPerfect file takes Mac286 only one second, compared with six seconds for the Insignia solution.

Scotten also said that because Mac286 now supports extended memory, it can run popular programs that SoftPC, even with the add-on module, can't, including Release 3 of 1-2-3. And Mac286, with its on-board memory, runs under MultiFinder on any Mac II, whereas SoftPC EGA/AT requires 4 Mbytes of Mac RAM to run at all, 5 Mbytes to run under MultiFinder, and 8 Mbytes to get access to both MultiFinder and expanded memory.

Mikhail Frankfurter, employee development administrator at Bank of America's San Francisco-based Business Services Division, said he recently installed the new one-board Mac286 in his Mac IIcx. He ordered the board, he said, to be able to run specialized software for tracking enrollment in training programs his group offers. Now, he said, the organization may adopt the board as part of the payroll-processing package it markets, so that it can compete for business at Mac-based sites even though its software runs under DOS.

Orange Micro Inc. is located at 1400 N. Lakeview Ave., Anaheim, Calif. 92807; (714) 779-2772. □

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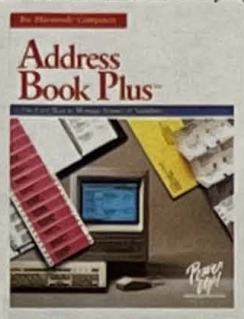

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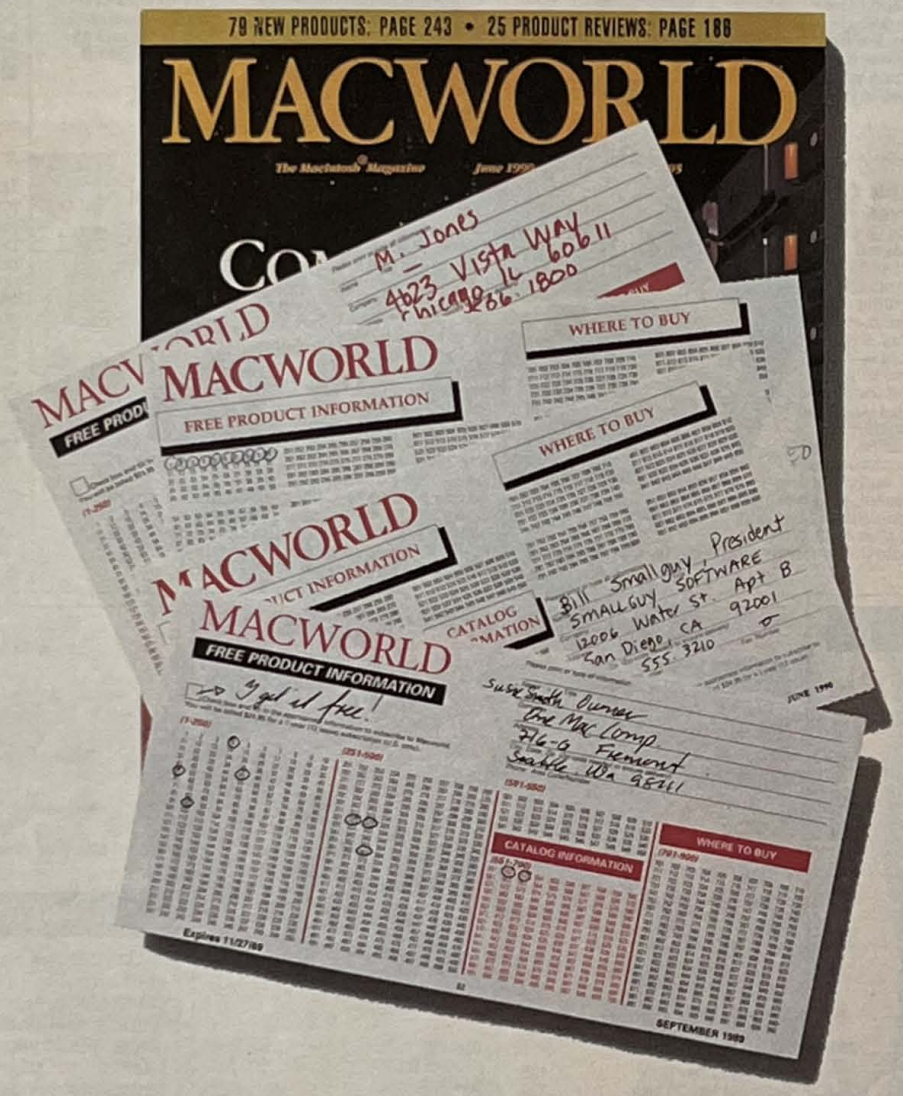
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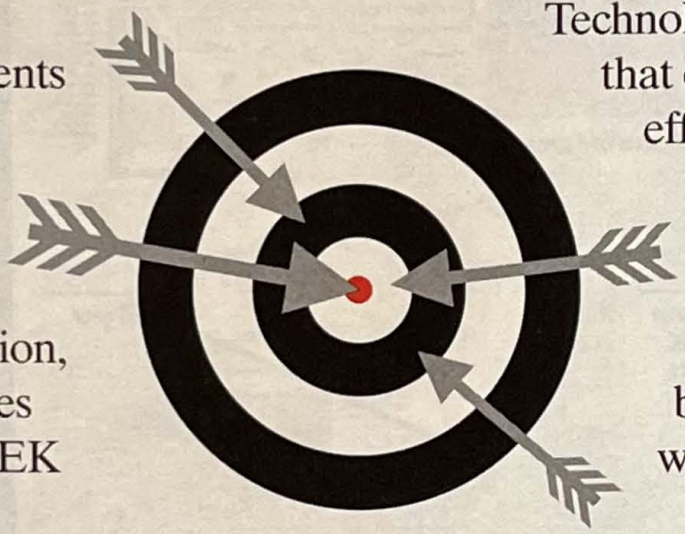

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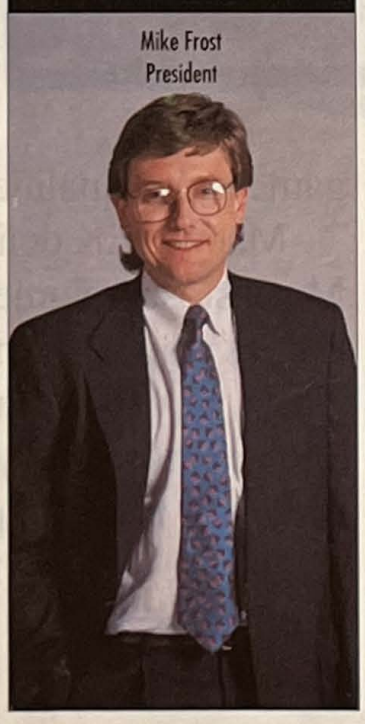

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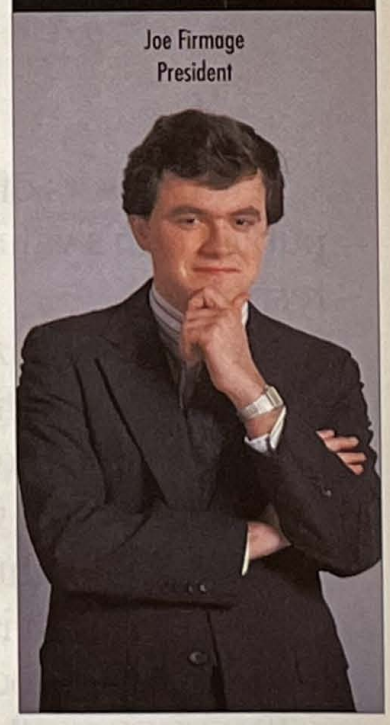

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New image tools for scientists

GTFS upgrades Ultimage, adds lower-cost version

By Douglass Perry and Henry Norr

Santa Rosa, Calif. — GTFS Inc. last month began shipping an updated version of Ultimage, its scientific image-processing software, as well as a stripped-down release for users who do not need the full program's advanced quantitative-analysis tools.

Both Ultimage, priced at $2,990, and the new $2,090 Ultimage/S are designed for enhancement, manipulation, and quantitative and morphological analysis of visual data by scientists, doctors and engineers.

Features added to the new version, 1.34, of Ultimage and built into the new program (also labeled Version 1.34) include an improved interface; an automatic permutation function that makes it possible to import images stored in the Intel data format; and floating-point calibration, which for the first time allows users to obtain all measurements in real units.

Both programs generate histograms and scatter plots showing the distribution of particles with respect to any one or any two of 35 measurements. The new version lets users print these and all other reports and save them in ASCII format.

A tool kit now bundled with both Ultimage and Ultimage/S lets users develop extension modules that provide additional features. The kit includes libraries; examples; and documentation for C, Fortran and Pascal. One extension module shipped with the programs lets users save an image in ASCII format.

Both programs provide a wide range of image-enhancement options, including edge and contour detection, noise removal, detail attenuation, histogram equalization, and operators for image comparison and combination. Frequency-domain-analysis capabilities include direct and inverse Fast Fourier Transforms (FFTs) and frequency filtering. Binary and gray-level morphological transformation functions let users observe the geometry of regions and extract the simplest forms for modeling and identification.

Both Ultimage and Ultimage/S provide standard measurements such as distance between points, angles, area, density and gray-level intensity of regions defined in an image, the company said. The more expensive version, however, also offers automatic detection and counting of particles according to user-defined criteria, as well as computation of 42 morphological parameters per object.

Ultimage can, for example, describe an object's center of mass, perimeter and roundness, a capability useful for identifying sickle cells, for instance. It can measure the size of a selected object, determine the number of like objects and their distribution throughout the entire image, and classify the object according to its morphology.

John Mardinly, a materials specialist at Lockheed Missiles and Space Co. of Sunnyvale, Calif., said he uses Ultimage and GTFS' Image Accelerator, a $2,000 NuBus card based on the Motorola DSP56001 digital signal processor, to evaluate and enhance high-resolution images of semiconductors generated by transmission electron microscopy.

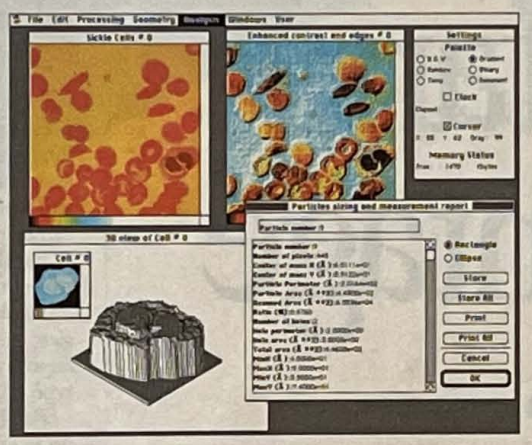
"I can do two-dimensional FFTs very quickly and very nicely, with just a low-priced add-on to my Mac," he said. "That's something undreamed of only a few years ago. The price is a tiny fraction of the cost of tools for doing the same job on other systems."

The more than 3,000 scientists who make up the electron microscopy community in the United States have "almost completely, unanimously embraced the Mac," Mardinly said.

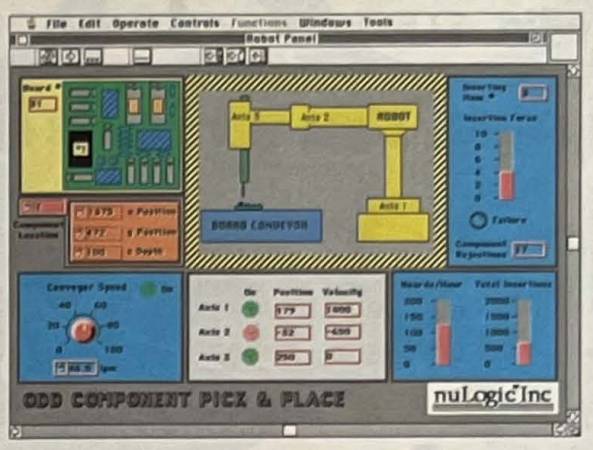
In addition to the digital signal processing (DSP) board and the Motorola DSP Development System ($495), Ultimage-related products marketed by GTFS include ROI-Pack ($29), the MaskFFT-Pack ($99) extension modules and an interface for Canon's FP-510 color inkjet printer ($199).

Interfaces for two image-capture boards, Data Translation Inc.'s QuickCapture and Neotech Ltd.'s Image Grabber, are available from GTFS. The company also resells the Image Grabber at $1,499, along with optional add-ons that support time-lapse photography and animation, 24-color capture, and remote control of Canon still-video systems.

GTFS Inc. is located at 2455 Bennett Valley Road, Suite 100C, Santa Rosa, Calif. 95404; (707) 579-1733. □



GTFS' Ultimage offers a wide range of image-enhancement and transformation options, as well as measurement of 42 morphological parameters, to help researchers in medicine and other fields interpret data from microscopes and other video sources.



With nuControl VIs, users can program and control three axes of motion. The application at left controls a robot arm that picks components out of a bin and places them in highlighted areas in the printed circuit board (upper left).

National Instruments board supports new GPIB standard

By Rochelle Garner

Austin, Texas — National Instruments Corp. next month will launch a series of enhanced data-acquisition boards that support IEEE 488.2, the latest version of the industry-standard General Purpose Interface Bus specification.

First in the new line will be a board for the Mac SE/30, due July 1. The $495 GPIB-SE/30 plugs into the SE/30's Processor Direct Slot and will provide the increased functionality of the new GPIB standard when compliant instruments become available. No 488.2-compatible instruments have yet been announced.

The new standard more completely defines how controllers and devices interact, in addition to defining data formats, message-handling protocols, common instrument commands and standard status reporting. Compliance with 488.2 is required to work with the new Standard Commands for Programmable Instrumentation standard, which will make it possible for similar instruments, regardless of manufacturer, to be programmed in the same way.

In a separate announcement, nuLogic Inc. said it now offers a library of virtual instruments, based on National's LabVIEW 2.0 graphical programming and instrument-control language, for nuLogic's nuControl motion-control board. The $195 nuControl VIs software provides the necessary code and icons to create programs using a variety of motions and commands, such as Load Acceleration, Read Velocity, Multi-Axis Start and Find Home.

The nuControl, a $1,795 NuBus board, controls three axes of movement for industrial applications, such as robotics.

National Instruments Corp. is at 6504 Bridge Point Parkway, Austin, Texas 78730; (512) 794-0100.

nuLogic Inc. is located at 945 Great Plain Ave., Needham, Mass. 02192; (617) 444-7680. □

Renamed SimMac promises Mac-style interface for 3270 apps

By John Battelle

Ottawa — Simware Inc. last month shipped SimMac 3.0, an updated and renamed version of its Mac3270 2.0 mainframe-connectivity software.

SimMac has been updated to present users with a Maclike graphical interface to mainframe applications that usually are accessed via a 3270 terminal-emulation window.

Managers and administrators can use View, an extension of SimMac's built-in Advantage scripting language, to associate Macintosh interface features such as buttons and check boxes with standard 3270-emulation features.

Simware renamed Mac3270 to more closely match its MS-DOS cousin, SimPC, which has essentially the same functionality as SimMac, the company said. Most Advantage scripts can be shared between SimPC and SimMac, although some system-specific scripts will not translate.

Several other graphical overlays for mainframe applications have been announced or are available, including MacWorkStation, an Apple tool kit that requires modifications to mainframe code, and MitemView, a HyperCard-based front end from Mitem Corp. of San Jose, Calif.

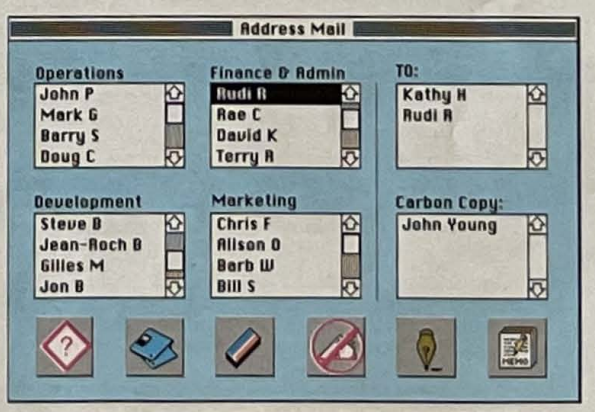
Simware is claiming distinction in the field because SimMac is not based on HyperCard and it does not require the user to change host code. Elmsford, N.Y.-based Connectivité Corp., however, has announced Masquerade3270, another 3270 graphical-interface tool that won't require HyperCard or mainframe programming (see MacWEEK, April 10). That package will ship later this month, a Connectivité spokeswoman said.

Dennis Fletcher, manager of systems architecture at San Francisco-based Electric Power Research Institute, is evaluating SimMac 3.0 for possible use with Electric Power's PROFS system. "We'd like to use it for PROFS and as a front end to mainframe-based custom applications," he said. Fletcher said he is also evaluating MitemView.

SimMac is available in both Async and Master versions. The Async version works with Simware's Sim3278 software for emulation and file transfer over dial-up lines. The Master version supports async and a variety of other terminal-emulation modes and physical connections, including Apple's Coax/Twinax card. It works with Simware's SimXfer file transfer software. Both versions include VT100 and TTY emulation.

SimMac Async costs $265 per single copy; SimMac Master costs $340 per copy. Site licensing is also available.

Simware Inc. is located at 20 Colonnade Road, Ottawa, Ontario, Canada K2E 7M6; (613) 727-1779. □



SimMac, an upgrade to Simware's Mac3270 mainframe connectivity software, makes it possible for administrators to place a Mac interface on top of 3270 applications such as this enterprisewide mail system.

New Media STEVE ROSENTHAL

Planning visual, aural space in the big picture

Imagine you're a tiny hummingbird hovering in front of a Macintosh screen. What would it look like from that viewpoint? The same way it looks to a human user, but bigger? Or very different? How does scale change an image?

If you're designing multimedia (or video or slide-style presentations), scale can certainly be a significant factor. A big screen isn't just a bigger and fuzzier monitor placed a little farther away. When done right, big-screen multimedia can be as different from what you see on a desktop monitor as big-screen motion pictures are from the television in your den.

An eyeful. In front of an ordinary Mac screen, you normally adjust your viewing distance to see the display using only your central vision. But in a lighted room, what you see is framed by the monitor case, maybe a few shelves, a CPU case, a phone and so forth. Your psychological reference frame is fixed, while you look out through the glass of the screen to a *moving* image. That also creates a certain emotional distance, a sense of objectivity.

But when you watch a big screen, it's usually in a darkened auditorium and close up. The image fills your visual space. You're using peripheral as well as central vision. Your psychological reference point shifts, so that now you feel that you are in the moving space along with the image. You're involved, a participant as well as an observer.

When you design multimedia for the big screen, it's best to consider these differences. Movement is much more powerful and should be used more subtly. Appropriate movement that takes that psychological inertia and reference point into account can be much more compelling, but sudden cuts and jumps can be much more disorienting.

Range and size. The readability of type also varies more than the scaling factor alone would indicate. On an ordinary Mac screen, 8-point type is readable, but so is 36 or even 72 point. There's a wide range of type sizes and styles that will be perfectly legible from an ordinary viewing position.

That might not be true if your work is viewed on a large screen. If your audience is seated close to the screen, big type can occupy too much of the viewer's visual field to be assimilated. That means it takes longer to read, and words that have confusing visual outlines can be particularly hard to keep straight.

For the many in the audience who aren't close to the screen, however, small type won't be readable at all. If you show to a group of any size, the people in the back may be 10 times as far away as those in the front, and the smallest type might look as little as one-tenth as large.

Furthermore, there's less the viewer can do to adjust. Once you're sitting 20 feet away, craning your neck a foot closer to the screen won't double the apparent size of a line of tiny type the way it would if you were at a desk two feet from the face of a CRT.

Aural space. With a small screen, sound can play an important part in the presentation, but it can rarely add much to the experience of space. Because the visual field is not totally involving, having a sound system that provides depth clues can often be more jarring than reinforcing. If you're not careful, you can get the artificial "ping-pong" effect that characterized early stereo systems.

But with a big screen, you almost need good stereo sound to stay consistent with the visual perception of space. Most producers I know like to use more than just the Mac's built-in sound capabilities if they're aiming for big-screen presentation.

If you'll be presenting to a medium-size or large group, think about volume range. At the front rows, high volumes will blast your listeners, while those in back won't be able to hear low levels. Multiple speakers will help, but so will good sound-design practices.

Just the highlights. These are just a few of the factors to consider when you're planning big displays. But for now, that's all the information about big moving images that I can fit into this small, non-moving space. □

Send tips and comments to Steve Rosenthal, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; AppleLink: Steve.R; MCI: 114-8611.

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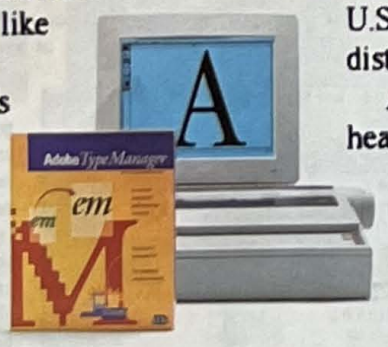

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Letters

File Force user gives database high marks

Your review of ACIUS Inc.'s File Force in the May 22 issue contains several misleading statements about the performance of the product. While the article praises the speed of importing data, it goes on to say "but with the data in place, file operations were slower than the flat-file managers, often by orders of magnitude."

Tests I've performed involving searching, sorting, deleting and updating records consistently show File Force to be as fast or faster than FileMaker. It appears that the reviewer did not use indexed fields in the File Force database. File Force allows the user to select which fields are indexed and thus conserve storage space, unlike FileMaker, which indexes all fields.

Fault is also found with File Force's "confusing and non-intuitive environment for designing layouts." I find that the File Force layout editor works very much like MacDraw and is quite similar to, although more extensive than, the layout editor in FileMaker. File Force also generates any of its eight different layout styles automatically, including any or all of the fields from a file.

File Force was also criticized for requiring separate input and output layouts. In fact, the same layout may be used for both. However, by doing so users would miss one of File Force's best features: the variety of ways users can view and edit their data.

Another interesting aspect of the review is the premise that ease of use is correlated with lack of documentation. My experience has shown that novice users benefit the most from extensive documentation.

File Force is a very rich program with some complex features, but it is certainly within reach of a novice user willing to spend a few hours engaging in the strange behavior of reading the documentation.

Tony Oppenheim
Options Computer Consulting
New York

Reader burned out on screen-saver coverage

Why write about screen savers? Hardly a MacWEEK is published without a review or update of some screen-saver utility.

No one needs a screen saver. It takes a long time of displaying the same thing before an image is etched on the screen. Also, all Macs and monitors have a built-in screen saver: the brightness control. And if that fails, a replacement monitor for a black-and-white Mac costs less than a screen saver. Finally, a screen saver is just one more INIT

GORDON STUDER

cluttering up memory and introducing compatibility problems.

MacWEEK doesn't devote much space to games, so why the interest in screen savers, which, if not games, are certainly toys?

Gregory Jorgensen and Kevin McDonald
NewConcepts Engineering
Portland, Ore.

Rounding corners won't put econo Mac in the clear

Does Apple seriously believe people haven't been buying the Mac Plus because the corners on the case aren't round enough and because it has been around since 1986? How about that fact that it's slow, it isn't expandable, and it has a 9-inch black-and-white screen?

The company is fooling itself if it expects its solution to the Plus (a new Mac that is just as slow, not expandable, and that traps you with a 9-inch black-and-white screen) to be a "high-volume" product.

If I were a Macintosh software developer, I would put all my people on Windows 3.0 projects, since Apple's current strategy isn't likely to maintain even the share of the market it already has.

Ace Goodman
Olympia, Wash.

A long ride down from corporate ivory towers

J. Russell Krueger's letter of May 22 suggests that the ultimate success of any venture can be attributed to the investment community. He apparently also believes that General Motors Corp.'s market share is continually increasing.

His view reminds me of a remark that I overheard several years ago in an elevator in GM's Detroit headquarters: "General Motors is not in the market to make cars. General Motors exists to make money for its stockholders."

Well, GM is still the largest auto manufacturer in the world, no thanks to the attitude expressed on that elevator. Many of us have been offended by GM's general attitude that it is spending lots of corporate cash to counteract a decade of bad feeling.

I hope Apple doesn't follow a similar direction. Where I put my money depends on the best product I can afford. As Krueger might understand, it's only a business decision. I want the best for my buck.

Incidentally, that elevator was on its way down.

Jim Hauschultz, industrial film and video producer
St. Louis

It is the "trade rags," as J. Russell Krueger calls them in his May 22 letter, that motivated Apple to extend its warranty and to develop econo Macs.

It is trade rags that are saving Apple and pointing out the mistakes that should not have been made in the first place. It's a good thing Apple reads these trade rags and listens!

Azamul Haque
Cuyahoga Community College
Cleveland

It's the same DOS dog behind new Windows

GORDON STUDER

As a grizzled DOS veteran and a recent Mac convert, I fail to see the point of all the gloom and doom prophecy over Windows 3.0. I have been a DOS user since day one. I was one of the foolish ones who bought a 256-Kbyte IBM PC and other IBM machines. I listened to the hoopla of Windows, DR DOS and GEM, all of which promised what the Mac delivered. The GUI on the Mac is easy and it is fun. The idea that another user might want to help you was totally foreign to me until I bought a Mac.

Windows 3.0 is much more difficult to configure than a Mac. You don't just drag stuff into the System folder to make it work. There are few desk accessories and no Control Panel devices. It is still an overlay to a very flawed, character-based, 10-year-old operating system that has been saddled with compatibility with archaic integrated-circuit architecture.

Mac users, chill out. DOS is still the same dog it was before. It just got a new haircut.

Mark Infanger,
vice president, sales
Classic Configurations Inc.
Houston

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Editorial

A/UX 2.0 packs a powerful punch

While a lot of attention during the past several months has been focused on the status of System 7.0 and Windows 3.0, Apple this month has quietly released its other operating system, A/UX 2.0.

The other operating system climbs out of the same digital gene pool as NeXT's NextStep, Sun Microsystems' Open Look, MIT's X Window System and the Open Software Foundation's Motif.

A/UX 2.0 and the offerings from other vendors provide a graphical user interface on top of Unix, designed with the hope that giving a face lift to the powerful, 20-year-old operating system will eventually make it accessible to "mere mortals," as NeXT founder Steve Jobs would say.

System 7.0 might be fantastic, but it still won't pack the punch of A/UX, which is more than just an industry standard-compliant Unix operating system.

Consider what A/UX 2.0 can do. Unlike any other flavor of Unix, A/UX 2.0 makes the huge base of Mac application software available to Unix users.

A/UX 2.0 gives much of the Unix operating system a Macintosh look and feel. It looks like it's running under MultiFinder, complete with the Apple menu, Control Panel devices and desk accessories. Unix volumes appear on the desktop as icons and in the standard file dialog box. Even some of the Unix utilities have been given a Mac interface.

Best of all, users can easily switch between Unix applications and Mac software, such as MacWrite II, 4th Dimension, Power Point, HyperCard and Wingz. Users can even run X Window, Motif and MS-DOS (using Insignia Solutions' Soft PC) applications along with Mac applications under A/UX 2.0.

Apple should be pushing what it can deliver today, rather than just focusing on the promise of System 7.0. For customers who require Unix compliance or a powerful workstation, A/UX 2.0 should be at the top of the list. □

Small business back in Apple's plans

Apple's recent changes affecting Macintosh dealers reflect the company's renewed concerns for customers who work outside of large corporations. Apple has made it clear that it wants dealers to address more-specialized market segments as well as small to midsize businesses, and it is helping dealers target as well as become successful in marketing to these areas. If it works, it's a win-win situation for dealers and, most importantly, for users.

It was, after all, the individual enthusiast who gave the Mac its market momentum. And during the past few years, Apple has felt a lot of heat from users and observers who believe that Apple has neglected its most ardent supporters. Now Apple is encouraging dealers to serve this orphaned constituency.

Mac dealers will face a number of challenges. For one, it will always be more lucrative to go for that "big sale" at one large customer site than to try to satisfy the disparate needs and interests of a diverse customer base. Second, smaller companies are more likely to opt for Apple's upcoming econo Macs, which means that dealers will face even greater pressure to sell in volume than they do today.

But for future incarnations of the Mac to push the realm of computing, it's all necessary. Without it, the Mac will become an expensive artifact seen only in the largest companies, an interesting footnote from a visionary company that forgot the foundation that gave it its start. □

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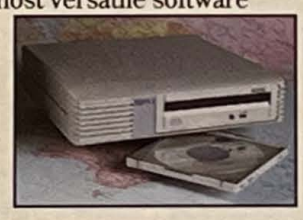

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TRENDS

Word for Windows challenges Mac GUI

Managers weigh Mac, PC alternatives

By Dale Coleman

The Mac's most immediate feature and greatest advantage to many users has always been its consistent graphical user interface. In the world of business word processing, the advantage of the Mac's GUI has been a major part of Apple's thunder in its assault on the business market. With the advent of credible GUI word processing on DOS platforms running Windows, managers in mixed shops (about 80 percent of MacWEEK's top 200 sites) are faced with new alternatives when making word processing recommendations.

Split decisions. "For word processing, we use Microsoft Word on the Mac," said Jeff Haverstock, professional support analyst for Visa U.S.A. Inc. in San Mateo, Calif. "We [also] like the Windows version, except for performance. It looks like the Mac version of Word has essentially the same features and gives DOS users the benefits of a GUI."

Although upper management favors the Mac, Haverstock's shop is overwhelmingly made up of IBM PS/2 Model 70s, with Macs (mostly IIcx and IIci models) accounting for less than 30 percent of micros.

Despite the benefits of a GUI on IBM PCs and compatibles, Haverstock said he sees a big difference in speed and disk-access performance between the Mac and the PS/2 running Windows, with the Mac significantly faster. Mac word processing also has an edge over Windows in support. Haverstock said that even with Windows' GUI, the Mac is easier to learn and requires much less support.

Support figures high for Michael Keane, a member of the Microcomputer Managers Workstation Productivity Group at Tandem Computers Inc. in Cupertino, Calif.

"We create a large number of technical documents," he said, "and for this application we're standardized on the Mac and Microsoft Word because of the Mac's inherent ease of use and lighter support loads, especially for group managers and others whose primary application is presentations and reports. The Mac is still a lot less support-intensive than a PC running Windows."

Keane, whose group's responsibilities for a mixed shop of Macs, PCs and Unix workstations include setting corporate standards and training procedures, said that, for PC users, he advocates the Windows version of Word when possible, mainly for its GUI. "We recommend Word for Windows for the faster '286, '386x and '386 machines that have the horsepower needed to pull it off," Keane said. The most frequently approved Mac word processing setup is a Mac IIcx with Apple's 21-inch monochrome monitor, he said.

What an attitude. The inherent advantages of word processing on the Mac compared with the PC in the brave new world of Windows 3.0 are sometimes not enough to persuade the corporate manager to recommend the Mac over a similar PC configuration. Issues of price, ease of use and the GUI interface are often overridden by other considerations.

Nelson Gilbert, a member of the Microcomputer Support Team in the Electronics Systems Group at the Baltimore Westinghouse installation, expressed attitudes typical of those that Apple encounters in trying to sell to the corporate market.

"For reasons of compatibility and support, Macs are not generally recommended, but we've got some rebels around here and Macs continue to come in," Gilbert said. "But that's OK because we have an open-door policy around here. I call it Windows by example. Frequently users will put in a request for a Mac for a word processing application and I set them down in front of my '386 machine running Word on Windows 3.0. Their reaction is usually positive."

While the general consensus among longtime Mac users is that Windows 3.0 offers only 85 percent to 90 percent of what makes the Mac the best word processing platform (see The Mac Manager, MacWEEK, May 15), that extra 10 percent to 15 percent may not be enough to make a difference. Even though Gilbert admits that the Mac looks better and cleaner than Windows 3.0 when they are put next to each other, he still favors Windows 3.0. "It's fantastic and it will revolutionize computing on DOS machines," he said. "I can't say too strongly how good it is. It basically brings the Mac to DOS machines. I also hope it will slow down Mac migration."

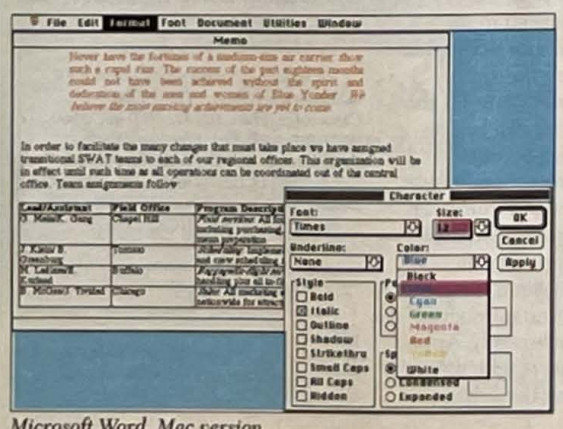
Is Windows-based GUI word processing equal to the Mac? Based on Gilbert's experience, probably not. "I will say that I have word processing users who were enthusiastic about the Windows GUI who, because of a job change, had to use Macs. At first many complained, but I'm impressed by the number who have gone out of their way to praise the advantages of word processing on the Mac compared with Windows."

That old Mac magic. Requests for personal computers at Westinghouse are carefully scrutinized for cost-effectiveness, although the Mac's reputation for ease of learning and use is factored in regularly. Users needing machines for word processing often request well-configured '386 machines for Windows with a lot of RAM and very large hard disks, only to have management specify less-expensive '286 machines with less RAM and a smaller hard disk. Other users with similar needs who request a Mac argue that it's easier to use and requires minimal training. "They put in a request for a Mac that's more expensive than a full-blown '386 machine and it'll fly," Gilbert said.

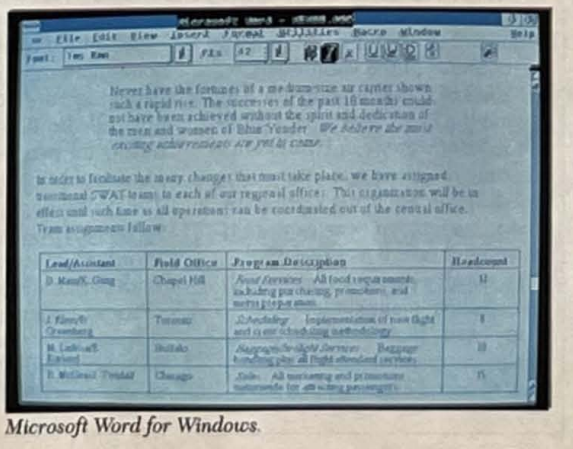
Westinghouse has a sophisticated publications department with high-end workstations, but Gilbert said the workstations are expensive. Despite the advances of Windows-based word processing, more and more requests for Macs are justified by the argument that users can create their own complex documents using a combination of Aldus

See Word, Page 40

Although Word for Windows delivers a credible GUI for word processing, the interface still lacks the grace of the Mac's and requires more support than the Mac version.



Microsoft Word, Mac version.



Microsoft Word for Windows.

COMPARISONS

Grammar checking your way to perfect prose

By Louise Kohl

Most literate people write for a living in one way or another. If you were to add up the total paper tonnage of every memo, corporate and school report, church bulletin, flier, and business or personal letter, it would undoubtedly outweigh the combined output of those who view writing as their profession. While most of this output is well below the standards of the Pulitzer Prize committee, it is usually important to the writer and often even to the recipient.

Since verbal communication is one of the skills that defines human beings, we might as well be good at it. At the bare minimum, this means that what we write should be clear and comprehensible, which in turn means that spelling and grammatical structure should be recognizable.

If you're reading this review, you probably use a computer to write; word processing is still the No. 1 use of personal computers. Macintosh spelling-checker packages have been around for some time, but until recently grammar checkers have been scarce. All at once, it seems, there are five of them: MacProof, Sensible Grammar, Correct Grammar, Grammatik Mac and RightWriter.

What most users want from a grammar checker is a program that is reliable and easy to operate and one that doesn't require a lot of switching among applications. It should be broad-based, covering many different areas, such as punctuation, grammar and spelling, and open to a fairly high level of user-defined modification. We are happy to say that all of the programs we examined satisfy most of these

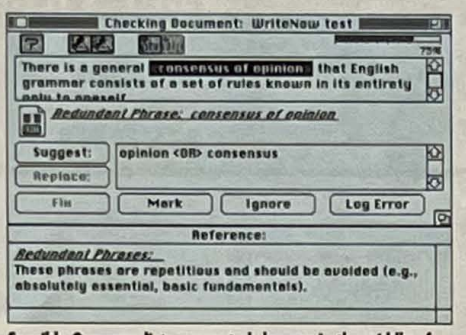
See Grammar, Page 30

Grammar *From previous page*

requirements to one degree or another. Ease of use, however, varied considerably.

MacProof 3.2.1. The only desk accessory among the programs we tested, Lexpertise USA Inc.'s MacProof gets high points in the ease-of-use category. It is also highly customizable. You can add items to both the spelling and usage dictionaries and select the types of errors you want the program to check for or ignore. All you have to do after setting your preferences is highlight the text you want to check and invoke MacProof from the Apple menu. Choose Run Checks from the MacProof menu, and you're off and proofing. MacProof highlights potentially problematic constructions and shows you the relevant rule. You make corrections by typing them into the Replace With box.

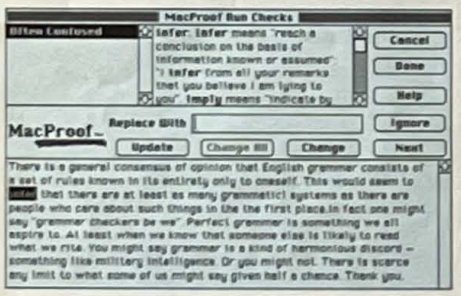
The set of rules used by MacProof is not as extensive as those used by grammar checkers designed as stand-alone applications; it missed a sentence ending in a preposition, for example. However, its spelling checker is excellent — possibly the best of the lot — as is its ability to catch capitalization and double-word problems. The text analysis is also good, although MacProof does not evaluate readability levels with tools such as the Flesch and Gunning Fog indexes as do the other products. It does, however, give you excellent word count and structure analysis, and it can print out all analyses.


Checking Document: WriteNow test
There is a general consensus of opinion that English grammar consists of a set of rules known in its entirety only to oneself.
Redundant Phrase: consensus of opinion
Suggest:
opinion <OR> consensus
Replace:
Fix
Mark
Ignore
Log Error
Reference:
Redundant Phrases:
These phrases are repetitious and should be avoided (e.g., absolutely essential, basic fundamentals).

Sensible Grammar lists suggested changes in the middle of the window, leaving less room to view the error in context.

Sensible Grammar 1.6. Sensible Software Inc.'s Sensible Grammar has an extensive and easy-to-customize phrase-editing feature that covers such categories as clichés, homophones, Latin terms, and racist and sexist phrases, among many others. You can edit the phrase lists by adding your own alternatives to words and phrases the program flags or by deleting or adding phrases of your own. Changes to the lists also can be made from within the main program window while you are checking a manuscript. You can turn phrase groups off altogether. (We recommend turning off the homophones option unless you are content to have common words such as "there" and "to" flagged every time they occur.) Overall, Sensible Grammar is highly customizable. In particular, the phrase-group editor is a powerful feature, and fine-tuning it to your specific style should be worth the time and

See Grammar, Page 32



The MacProof DA has the most Maclike check window, with a large context box and scrollable help windows.

Grammar checker file compatibility

	MacProof *	Sensible Grammar	Correct Grammar	Grammatik Mac	RightWriter
MacWrite II	●	●	●	●	●
MacWrite 4.5+	● (4.6 & 5.0)	●	●	●	●
Word 4.0	●	●	●	●	●
Word 3.0		●	●	●	●
MS Write		●	●		
MS Works		● (1 & 2)	●		
QuickLetter			●		
WordPerfect		● (1.0)	●	●	●
WriteNow		● (1 & 2)	●	● (RTF only)	●
MindWrite				●	
PageMaker		● (1.0)		● (3.0)	
ASCII	●	●	●	●	●

** As a DA, MacProof works with almost all word processors. This chart shows those with which it is format-compatible.*

In summary: Grammar checkers

We reviewed five grammar-checking programs: RightWriter, Sensible Grammar, Grammatik Mac, MacProof and Correct Grammar.

Some have more extensive rule sets than others, but all the programs we evaluated do an acceptable job of bringing errors in grammar and punctuation to your attention. Any of them will flag your most egregious errors and suggest alternatives. All are capable of some form of overall text analysis, such as word and sentence counts, and all but MacProof evaluate readability levels using the Flesch or Gunning Fog indexes.

MacProof is the only DA in the group and has the most powerful spelling checker. It is also the most expensive of the five programs. With the exception of Sensible Grammar, all the programs include spelling checkers, all of which are more than adequate. Two of the programs, Correct Grammar and RightWriter, give you the option of accessing Microsoft Word's dictionaries to check spelling.

All the applications operate by opening your document from within the checking program, and all but RightWriter work interactively. Because of this, RightWriter can be less straightforward to work with, at least initially. Grammatik Mac, a crossover from the IBM PC world, has the least-Macintoshlike interface and a dangerous automatic Save function. Of the stand-alone applications, we found Correct Grammar easiest to use. Also, it is compatible with more file formats (including AppleLink files) than the others. Sensible Grammar's editable phrase groups are a comprehensive and powerful feature but could take more time to modify than you want to spend.

Choosing one of these products for your own use is similar to choosing a word processor. It's largely a matter of personal preference and writing habits. Your chief practical consideration will be making sure that the grammar checker you use is compatible with your word processor and that it can check and mark your text without affecting formatting.

MacInTouch

RIC FORD AND RICK LEPAGE

Tracking down elusive PostScript problems

PRODUCTS

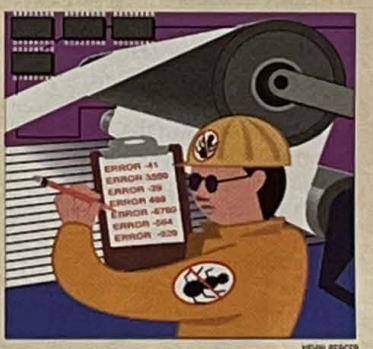
PostScript hacking. PostScript printing is so simple that most of us take the act of printing for granted. We get accustomed to selecting the Print command and having our pages tumble from the printer.

If you print a large number of complex documents or write your own PostScript programs, though, printing is not always so rosy. Errors in a PostScript program can waste paper (or typesetting film), time and patience. Programs like Adobe Systems' LaserTalk help make PostScript programming easier, but the nature of the link between the PostScript interpreter in a printer and the host computer is weak on returning helpful error messages when problems occur.

Frank Braswell of Systems of Merritt Inc. has written a debugger that helps relieve the tedium in tracking elusive errors in PostScript code. His program, the Advanced PostScript Error Handler, gets downloaded to a PostScript device. When a print job fails, it returns a detailed, hard-copy report that can be used to trace the error.

The reports that the Advanced PostScript Error Handler generates include not only the offending command and error name, but also the contents of the various stacks, the lines of code immediately following the error, and other details of the interpreter's environment at the time the error was encountered. If you are using a program like LaserTalk, you can capture the report and save it as a disk file.

Braswell's product comes with an extensive manual that details many of the most common PostScript programming errors and how to correct them.



KEVIN BERGER

The $295 program is only 23 Kbytes in size (and takes up a mere 18 Kbytes of a printer's virtual memory), but its small size belies the significant contribution it can offer to service bureaus and PostScript hackers.

BUGS & TIPS

Loosening file limits. With MultiFinder, the configuration matter dealing with the "number of open files" setting stored in the "boot blocks" of your start-up disk has become much more important. This parameter determines how many files can be opened for access at any one time on your Macintosh.

As the Mac has grown in its capability to handle more-complex combinations of programs, it is becoming more common to hit the open-file limit, which can be frustrating for people expecting the Mac's traditional user friendliness. The problem pops up at unexpected times, such as when Microsoft Word opens its temporary files or Fifth Generation Systems' Suitcase II tries to open a large number of suitcase files. Unfortunately, Apple has not provided users with any means of controlling the setting, but a few third-party vendors have filled the gap.

Suitcase II has a built-in answer to the problem. Its Settings button leads to a Power User Settings button, which lets you specify the maximum number of open files. After making the change, you must restart the Mac to reset the parameter from the boot blocks.

SUM Tools from Symantec Corp.'s SUM II package can also be used to raise the maximum number of open files. Choose the Edit Volume command from the Volume menu to select the start-up disk, then choose Edit Boot Blocks. Make sure you select Write Boot Blocks after updating the maximum file count. Again, the change will not take place until the Mac is restarted from that disk. SUM Tools also is useful for simply viewing the current setting, using the same menu items.

We have not found any shareware or freeware utilities to handle this task, so please let us know if you encounter one or create one yourself.

REFERENCE

Systems of Merritt Inc., 2551 Old Dobbin Drive E., Mobile, Ala. 36695; (205) 660-1240.

We welcome comments at MacWEEK, 4 Cambridge Center, Third Floor, Cambridge, Mass. 02142; (617) 497-2600; (617) 497-2646 (fax). Electronic mail: CompuServe: (Ric Ford) 72511,44, (Rick LePage) 76117,1765; GEnie, America Online, Delphi, MCI Mail, PAN: MACWEEKBOS. Connect: RICFORD, RICKLEPAGE. AppleLink: ("Attn: MacInTouch" in Subject): MACWEEK, Internet: 72511.44@COMPUSERVE.COM.

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Grammar

From Page 30

effort. The program does, however, lack a spelling checker. Instead, the company markets a separate spelling checker, Sensible Speller, for $99.95.

Once you have set up the program to your liking, running it is straightforward. Documents in most popular word processing formats can be opened directly. Be warned, however, that it doesn't like Microsoft Word documents that have been saved with Fast Save. And at least once when opening a MacWrite II version of the test document, the program informed us: "A merge delimiter matches a Grammar marker character. Do you want to continue?" We didn't.

Sensible Grammar lets you choose between checking the entire document or selected text. The program will automatically start checking your document as soon as you've selected it. Suggested changes appear in a text box. You can edit these suggestions or type in your own replacement words and phrases. If the solution is not immediately obvious, you can log it or mark it by using the appropriate buttons. You also can pull the entire sentence into the text window with a single click for more extensive rewriting.

The program can analyze the readability level of your document in terms of grade level, reading ease and human interest, and it gives you a word and sentence count.

Correct Grammar. Lifetree Software Inc.'s Correct Grammar is the easiest grammar checker to use. Its rule set is not the most comprehensive, but it is more than sufficient for anything short of a doctoral dissertation, and the program is compatible with a number of word processors ignored by the other programs we looked at, including Acta, Acta Advantage, QuickLetter and AppleLink files. It gives you the option to make a backup of your document before checking it, which is useful and can't hurt.

Correct Grammar is an interactive pro-

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Taking it in context

Checking grammar and usage is a far more complicated task than checking spelling, depending as it so often does on contextual matters, such as metaphor, that are opaque to the mundane, linear perceptions of a computer. Unfortunately, English grammar is not a straightforward discipline. As we recall from grammar- and high-school days, there are more exceptions than rules. Most of us have developed an idiosyncratic set of grammar, punctuation and mnemonic rules — some of which we are prepared to defend to the death, as readers of William Safire can appreciate.

The lesson to be learned from spelling checkers — that none of them entirely eliminates the need for a human proofreader — is even more evident in the case of grammar packages. With spelling checkers, you are usually safe in assuming that the suggested replacement word is spelled correctly. You don't have to check a dictionary to be confident that you're correcting a problem rather than exacerbating it.

Grammar checkers, on the other hand, require a human referee at almost every point. The computer does not read context; it does not, as far as we could tell, even read a whole sentence. The redundant phrase "general consensus of opinion" was universally picked up as two separate errors. This being the case, the applications can merely flag suspect instances and suggest how to fix them; only you can decide which way to move. The underlying principle of these programs is: "Here's a situation in which a lot of people make mistakes. You'd better check carefully to see if you're one of them." This is about as far as present computer and artificial-intelligence technology can take us.

Using a grammar-checking program efficiently and usefully is therefore as much a function of what you put into it as it is of the program itself. Use the customizable menus. If you know you have a tendency to make particular mistakes, be sure that feature is present and operating; but if you couldn't care less about the passive voice, for example, turn that rule off. (Both Correct Grammar and Grammatik Mac get a little hysterical over the passive voice, tending to flag almost every verb tense other than present.) Most of us have a few phrases that we overuse; if the program you're using lets you add such phrases, do so.

Two of the programs, Grammatik Mac and Correct Grammar, come with supplementary hard-copy "rule books" (Secrets of Successful Writing and The Vest-Pocket Writer's Guide). If this belt-and-suspenders approach appeals to you, other books you might find useful are Strunk & White's The Elements of Style, Fowler's Modern English Usage or The Chicago Manual of Style. — *By Louise Kohl*

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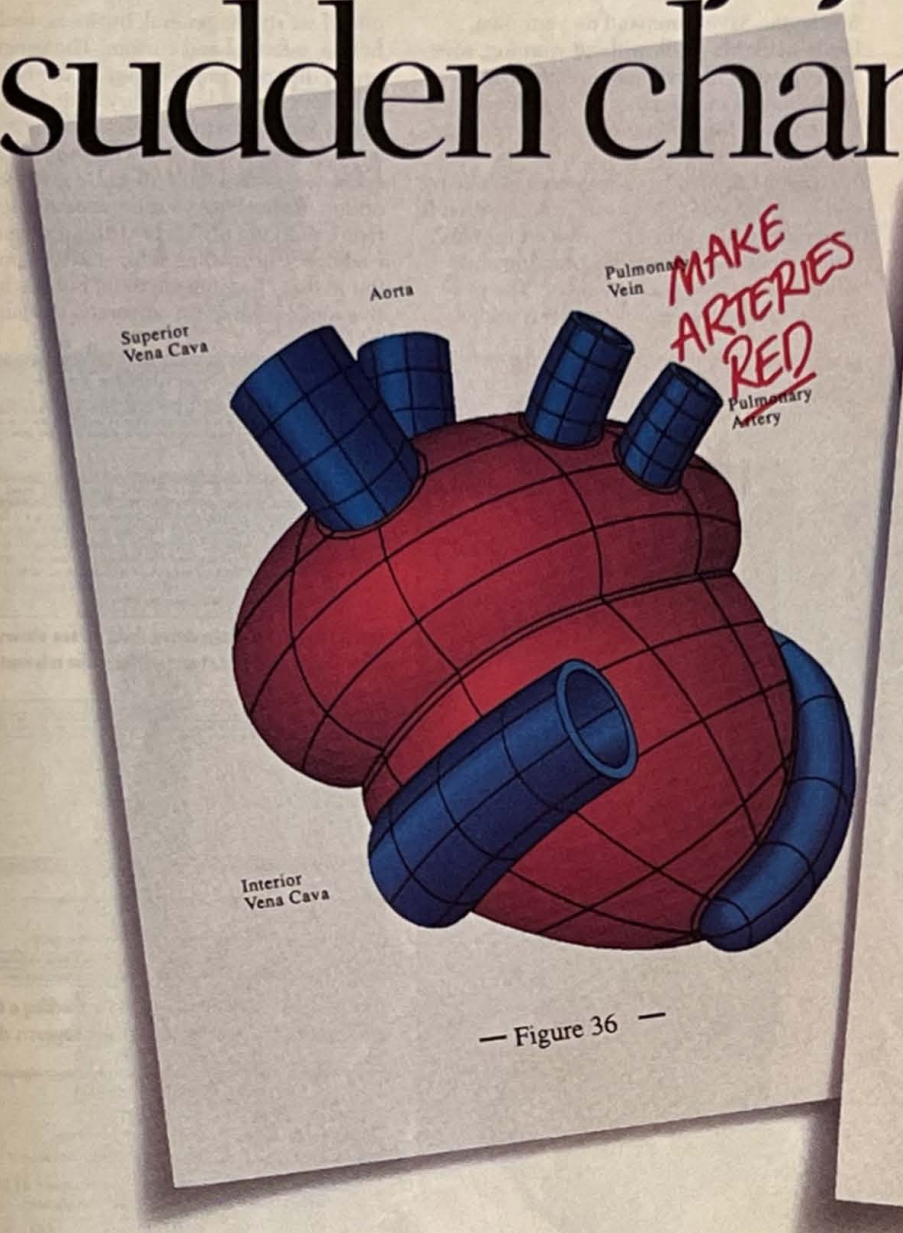
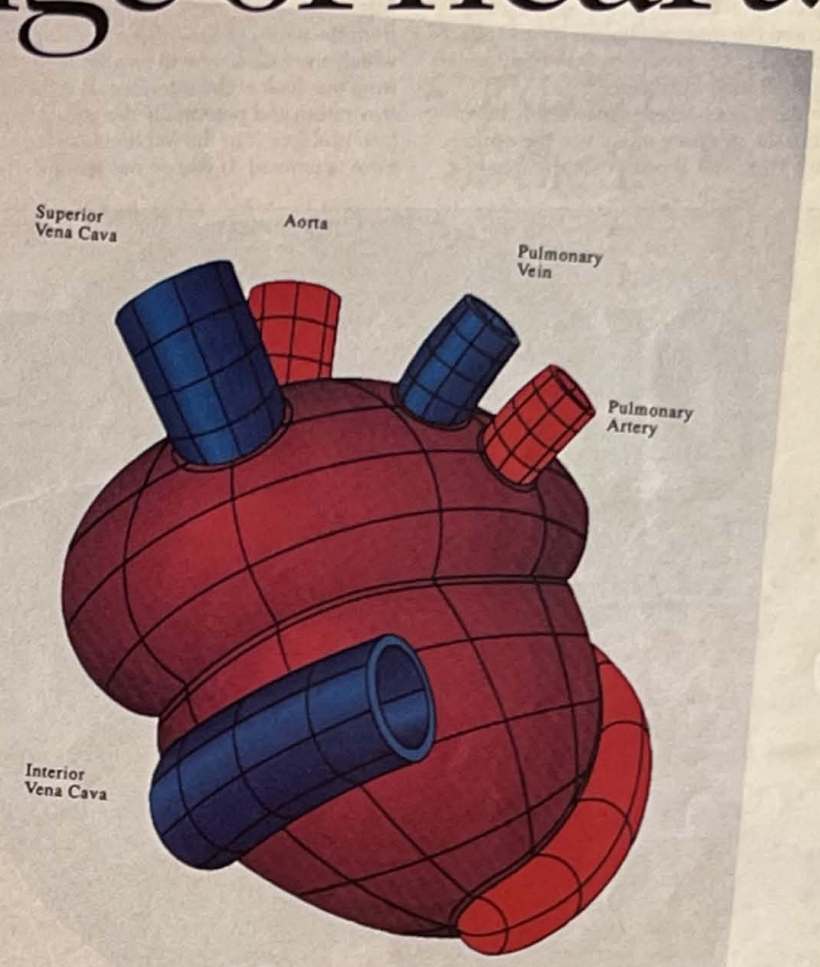


— Figure 36 —



— Figure 36 —

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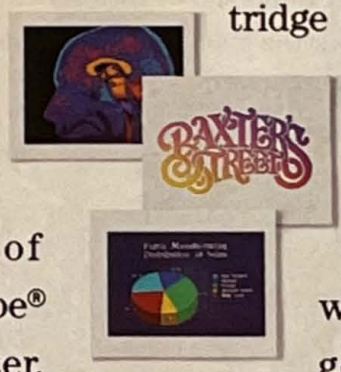

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C&C Computers and Communications

Grammar

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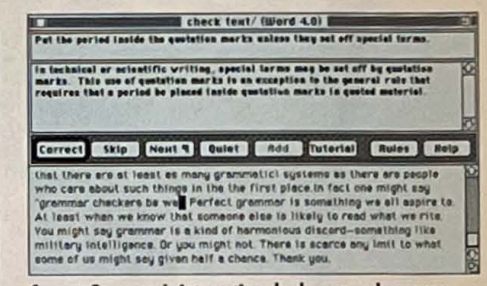
gram that you operate through a single window. The program's text is in an unusually small typeface that, unfortunately, can't be changed. Open the document you want to check, and the program begins its analysis automatically. An on-screen Quiet button lets you turn off individual rules.

The spelling checker is reasonably extensive, and the program offers you the option of using Microsoft Word's user dictionary. This feature is particularly helpful if you have already built up a user dictionary reflecting your writing style and audience.

Grammatik Mac. Reference Software International's Grammatik Mac is a crossover from the world of those "other" computers, which any Mac user will be able to guess from one look at the interface. But the most frustrating and potentially dangerous interface problem is in the implementation of the Save command. If you do not specifically invoke the Save command on your own, Grammatik Mac will, without warning, save the corrected file over your original document. This is rarely a positive feature. Play it safe and run the program on a copy of your document.

Grammatik Mac has a very comprehensive and customizable rule base. Customization is recommended, as the extensive set of rules tend to make the program's proofing and editing somewhat heavy-handed. The program allows you to check your text under one of six styles: general, business, technical, fiction, informal and custom. The program uses a different modification of the basic rules for each style category. This is an intelligent feature; writing styles, like styles of speech, necessarily vary with their target audience. Grammatik Mac also gives you the option of checking your document interactively, marking it with or without comments ("advice"), or reading it for statistics only. We found that choosing anything but the interactive mode gave us an on-screen readability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Correct
Skip
Next ¶
Quiet
Add
Tutorial
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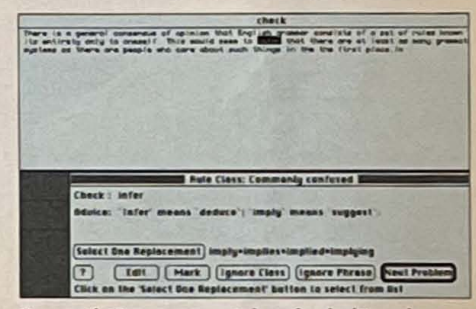
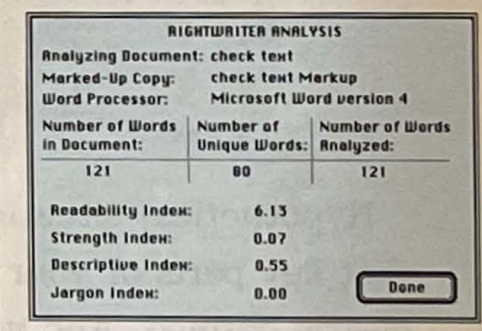
Help
that there are at least as many grammatical systems as there are people who care about such things in the first place.In fact one might say "grammar checkers be we Perfect grammar is something we all aspire to. At least when we know that someone else is likely to read what we rite. You might say grammar is a kind of harmonious discord--something like military intelligence. Or you might not. There is scarce any limit to what some of us might say given half a chance. Thank you.

Correct Grammar's interactive check screen shows suspected errors in context and explains the relevant rules.



Grammatik Mac uses two windows for checking a document. One highlights an error; the other suggests changes.



All grammar checkers except MacProof have a readability-analysis window similar to RightWriter's, shown here.

statistics box that could be closed only by quitting the application. If you choose either of the marked-text options, Grammatik Mac saves the marked document over your original if you're not careful. Questionable constructions are marked with a "#," making them easy to find electronically. You can edit the marked text and then ask the program to remove its embedded comments.

RightWriter 3.10. RightSoft Inc.'s RightWriter is the only program we evaluated that does not work in an interactive mode. Instead, it creates a separate Markup document, which consists of the program's comments embedded in a copy of your original manuscript. You can then edit that document in your word processor and have RightWriter remove the embedded comments afterwards. This sounds more complicated than it is in practice. Still, it may take you a while to adjust to RightWriter's style, especially if you are used to the interactive mode of spelling checkers or other grammar checkers. It is probably most conveniently used alongside your word processor under MultiFinder.

The only serious drawback to this method

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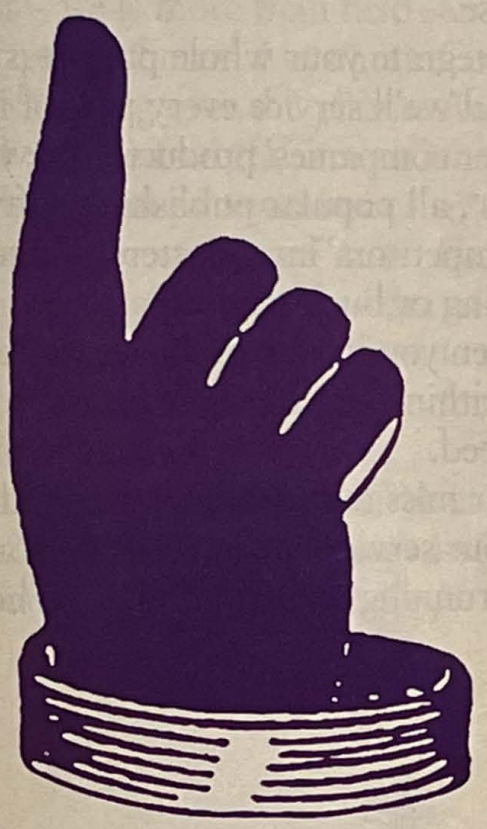

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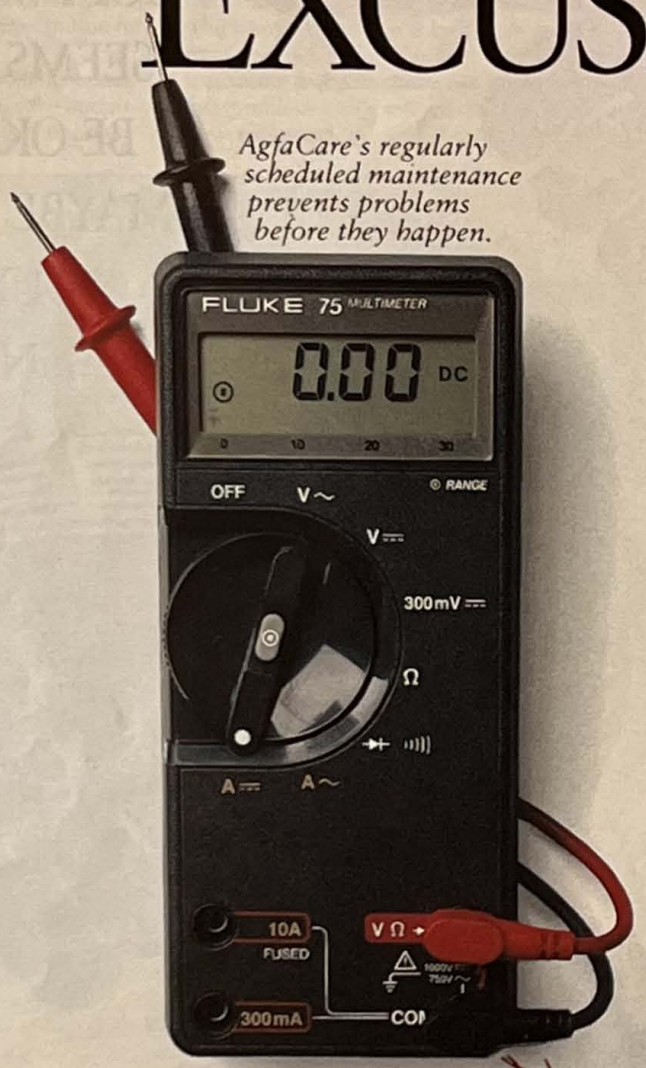

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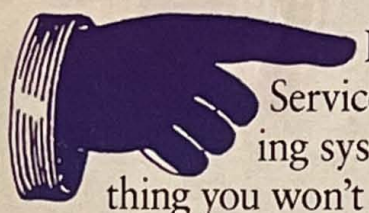

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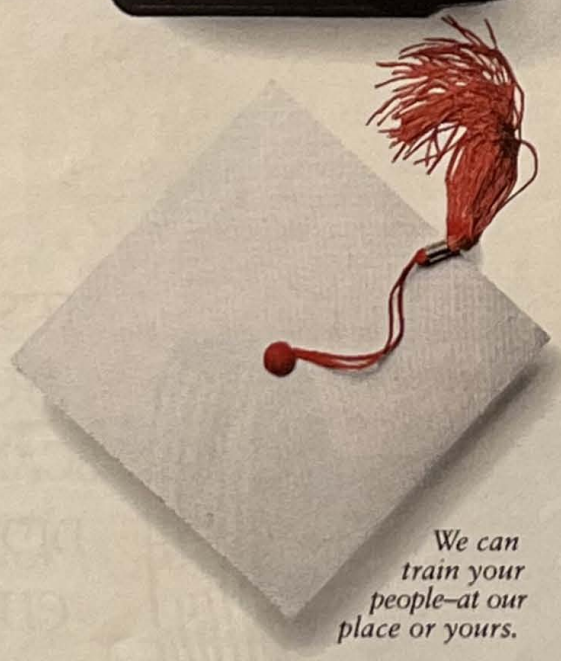

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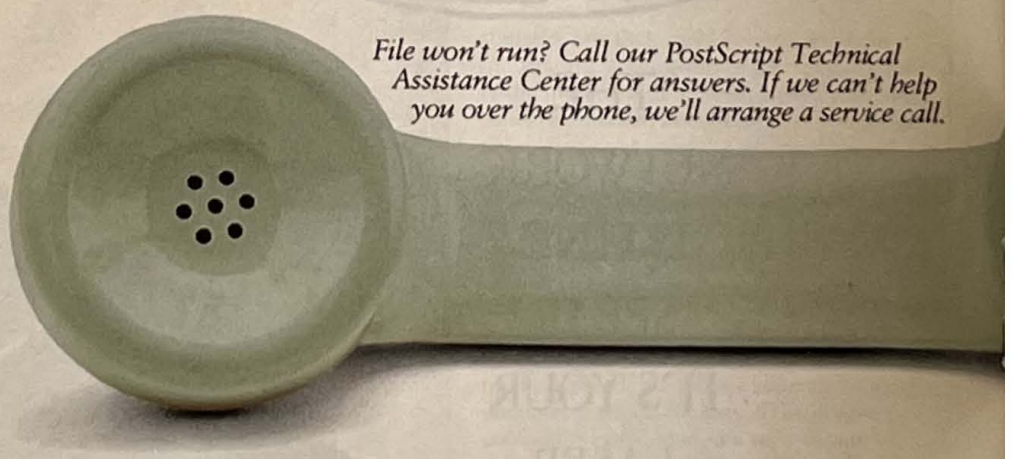

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Grammar

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is that it is difficult to tell what part of your text is actually under scrutiny at any particular point. This is especially true if you are working from a printout of the Markup document. Our preference would be to have the program work interactively while saving a Markup document with questionable elements displayed in boldface or otherwise more clearly indicated.

The program's spelling checker, like Correct Grammar's, gives you the option of using Microsoft Word's user dictionaries. Modifying the existing dictionaries is intimidatingly listed in the manual as "for advanced users only." Like Grammatik Mac, RightWriter lets you designate a document's style. Categories include technical reports or articles, manuals, and proposals.

Offsetting the program's unusual work habits is its excellent set of grammar rules and its text analysis. In these respects, it is the most comprehensive of the grammar checkers.

Performance. Besides testing all five packages on a range of normal documents, as a controlled performance test we used the following short passage that incorporates a number of common grammar, spelling and typing errors:

"There is a general consensus of opinion that English grammar consists of a set of rules known in its entirety only to oneself. This would seem to infer that there are at least as many grammaticl systems as there are people who care about such things in the the first place.In fact one might say "grammar checkers be we". Perfect grammar is something we all aspire to. At least when we know that someone else is likely to read what we rite. You might say grammar is a kind of harmonious discord — something like military intelligence. Or you might not. There is scarce any lmit to what some of us might say given half a chance. Thank you."

Overall, the five programs were pretty consistent in their analyses of the test para-

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From the copy desk

The five grammar checkers reviewed here essentially try to duplicate as much as possible the functions of a human copy editor. We gave the five packages to MacWEEK's copy desk and asked them to evaluate them for use in their jobs editing MacWEEK stories. Here are their findings:

A MacWEEK article checked with Grammatik Mac was deemed harder to read than a Hemingway short story, the Gettysburg Address and a life insurance policy. While we were amused by these findings, we weren't especially surprised. Because MacWEEK is a technical magazine, its articles often contain long, unusual words that will reduce any statistical ease-of-reading scores.

We were surprised, however, that some of the grammar checkers can go beyond pointing out misspelled words and double punctuation. Editing is a subtle job; improving a sentence may mean cutting out only one or two needless words. Grammatik Mac demonstrated this light touch when it suggested simplifying "no later than" to "by." The program also suggested changing "able to" to "can." It is changes such as these that make an editor's heart glad. And such changes are easy to miss, making the software a useful editing tool.

Most of the checkers also point out clichés, which are also easy to miss since they are so well-worn we often don't even notice them. Some of the programs look for potentially offensive language, including gender-specific words and obscenities. Many of the programs flag passive voice.

While we found all these features impressive, we would use a grammar checker only as a backup to our regular edits. Given the number of oddball constructions that crop up in real-world copy, the programs cannot be relied upon to catch every mistake. None of the grammar checkers could substitute for a human editor.

In fact, to use them effectively, you need to already have a good understanding of grammar. The programs merely suggest politely that you may want to change a phrase and then rely on your judgment to make the right call.

While the programs can be customized (an essential feature, otherwise the capitalization checkers would flag "Mac" and "PostScript," thereby driving us nuts), there are enough idiosyncrasies in computer jargon to make the grammar checkers cumbersome. Doing a grammar check on every story would be more time-consuming than we could afford at a weekly publication.

The programs were great brush-ups on grammar rules, however, and we had fun seeing which grammar faux pas they could catch. But, in short, we don't fear for our jobs. — *By Cate Corcoran, Anne Matera and Matthew Rothenberg*

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Word

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PageMaker and Microsoft Word or Microsoft Excel and PowerPoint (applications that are, coincidentally, available in Windows versions) without having to use the publications department. This strategy is working because these requests are being approved. "One of these days the technical publications department, which relies on expensive workstations, will be out of business," he said.

Gilbert is unsure of the future of Windows-based applications for document-creation purposes given the Mac's advantages, particularly universal support for PostScript output devices. "I'm not sure if word processing under Windows 3.0 will attain these abilities, but with growing support for PostScript output devices, it's possible. Windows is capable of making better and better presentations. It's too early to know for sure."

The ultimate winner? Will Windows-based GUI word processing prowess steal Apple's thunder? While the dust has yet to settle, in the real world of corporate microcomputer decision making, it's likely that the growing acceptance of Windows word processing will legitimize GUI word processing in general, making it easier for users to successfully justify a Mac. At the same time, Apple will have to continue to refine and improve the Mac and capitalize on its many strengths to avoid having its penetration into the corporate market stalled. The heated competition should be good for everyone. □

Grammar

From Page 38

graph. They all caught "general consensus of opinion" in two passes: "general consensus" and "consensus of opinion." "Grammar checkers be we" was flagged with a general "verb to be" warning, but not uniquely; all forms of the verb "to be" were flagged in the text. The period outside the quotation marks in that sentence was consistently flagged, as was the period without a space after it. However, Correct Grammar caught this error twice: The first time, the program read it as a sentence requiring a space after the period; on a second pass, it read the two sentences as one 32-word sentence. The programs with spelling checkers flagged all the misspelled words, and while their suggestion lists were not identical, the correct word was always one of the choices.

The readability analyses were similar, too. The consensus was that the passage was fairly easy to read and fell around the seventh- or eighth-grade reading level on the Flesch-Kincaid scale. Correct Grammar gave it an 8.8; Sensible Grammar, a 7; RightWriter, a 6.79. Grammatik Mac, covering all the bases, placed it in the sixth-to-10th-grade range. MacProof offers word and sentence counts but no readability analysis.

None of the programs flagged "harmonious discord" or "military intelligence." Obviously, when it comes to oxymorons, you're on your own.

Conclusions. All the grammar checkers do an acceptable job of bringing errors in grammar and punctuation to your attention. All but Sensible Grammar also include spelling checkers.

We liked Correct Grammar for its simplicity of operation, but we wish that all the programs used a DA interface like MacProof's. Sensible Grammar had the most checking power, thanks to its editable phrase groups.

But even the best grammar checker is no substitute for a good working knowledge of the rules of grammar. Perhaps the greatest benefits to be gained by using one of these programs are simply a grammatical consciousness-raising and a newfound knowledge of your own stylistic quirks. By using the programs and reading the manuals, you are likely to write more grammatically to begin with. □

Product Info

LEXPERTISE USA INC.
MacProof: $195
175 East 400 South, Suite 100, Salt Lake City, Utah 84111; (800) 354-5656

LIFETREE SOFTWARE INC.
Correct Grammar: $79
33 New Montgomery St., Suite 1260, San Francisco, Calif. 94105; (415) 541-7864

REFERENCE SOFTWARE INTERNATIONAL
Grammatik Mac: $99
330 Townsend St., Suite 123, San Francisco, Calif. 94107; (415) 541-0222

RIGHTSOFT INC.
RightWriter: $95
4545 Samuel St., Sarasota, Fla. 34233; (813) 923-0233

SENSIBLE SOFTWARE INC.
Sensible Grammar: $99.95
335 E. Big Beaver, Suite 207, Troy, Mich. 49083; (313) 528-1950

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- Microsoft Works 2.0
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REVIEWS

Calera's TopScan brings high-power OCR to Mac

TopScan

Calera Recognition Systems Inc.
List price: $2,995 for software alone; free with the $31,950 CDP 9000 and $19,950 CDP 6000 OCR processors

+ More accurate and much faster than any other Macintosh OCR product; good at retaining page layout.

− Expensive; unpolished software.

By Scott Beamer

With the introduction of Calera Recognition Systems Inc.'s TopScan software, Macintosh users now have access to the company's very powerful dedicated optical character recognition machines, the CDP 9000 (rated at 250 characters per second) and CDP 6000 (rated at 150 cps), previously available only for Unix and MS-DOS platforms.

In view of the high hardware costs for the CDP machines, one of the most surprising things about TopScan for the Mac is that the software runs on a Mac Plus, residing comfortably in 2 Mbytes of RAM. This is because TopScan itself contains no character-recognition algorithms; all OCR work is performed by the hardware.

An impressive amount of horsepower is crammed into the bigger-than-a-breadbox CDP case. Each of the four processor boards has its own 68020 "brain." Combined, they sport 5 Mbytes of RAM and 1.5 Mbytes of ROM. The built-in scanner can process a page in three seconds. An 80,000-word checklist hard-wired into the CDP is used interactively during the character-recognition process to increase accuracy.

Once set up, the CDP almost never requires attention except when you have to put pages in the 50-page sheet feeder bin. The CDP's scanner can accept sheet-fed material of 8.5 by 14 inches or smaller. Those who wish to scan newspapers, magazines or books without cutting them up will have to photocopy these materials first, decreasing accuracy.

Software specifics. TopScan does not bring new OCR capabilities to the Mac but rather brings performance superior to that of the other high-end Mac OCR products: Accutext from Xerox Imaging Systems Inc. (see MacWEEK, June 13, 1989) and OmniPage from Caere Corp. (see MacWEEK, Oct. 3, 1989.) These three products share the capability to read almost any printed material, including books, newspapers, magazines and even dot-matrix printer output. Accutext and OmniPage work in English and several foreign languages. TopScan works only in English.

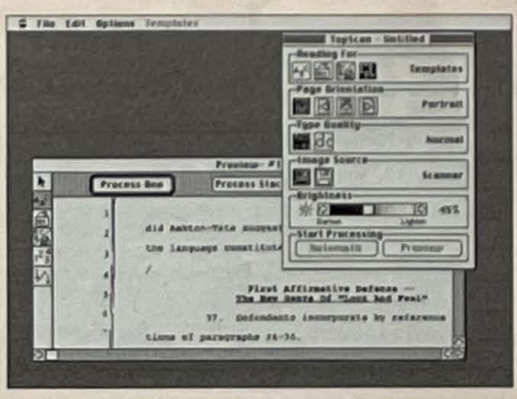
All three products offer automatic page definition. They can separate text from graphics automatically and can read multicolumn material. TopScan and Accutext can reproduce the multicolumn format in the resulting document.

Bold, italics and underlined text, as well as indents, tabs and justification, are recognized and reproduced by all three. It is also possible to specify which of these elements should be passed through to the final document. TopScan and Accutext can recognize and reproduce type sizes from 6 to 28 points. OmniPage can read from 8 to 72 points but cannot not reproduce the sizes in the final document.

Images scanned by TopScan can be saved as PICT, TIFF, black-and-white bit map and Calera's proprietary format, PD[4]. Words can be saved in plain text, MacWrite 5.0, MacWrite II, Word 3.0 and 4.0, WordPerfect, Rich Text Format, WriteNow, Excel and Wingz formats.

To increase OCR efficiency, TopScan offers impressive capabilities to defer recognition, whereby the operator scans files directly to disk

See TopScan, Page 44



TopScan provides good control over the OCR process. The front window holds scanner controls, while the background window previews the scan, allowing the user to select the areas and order of processing.

Reviews in Brief: DIRECTOR • INITPICKER • SUPER FONTINA

MacroMind Director 2.0

In the past, multimedia producers requiring animation have been forced to use a combination of Director and HyperCard, a marriage of convenience at best. Now MacroMind Inc.'s Director 2.0 offers interactive capabilities that rival HyperCard's.

Animators will notice no difference when using this version; the paint and animation tools are unchanged. Only the Score window sports additions for the scripts that are necessary for interactivity.

Support for 32-bit images has been added with this version, but there are several anomalies. Three paint tools work differently in 32-bit mode and the paint bucket doesn't work at all. The eyedropper tool works only if a user-created palette has been selected; otherwise, an error message appears. To select colors in 32-bit mode, they must be chosen from or altered in a 256-color palette. This is awkward; direct access to the color picker should have been provided. If a 32-bit image is imported while the monitor is in eight-bit mode, the image will be converted using the current eight-bit palette. However, if an eight-bit image is imported, the program asks whether it should create a new palette. It is also unfortunate that the color depth of each cast member cannot be specified independently of the monitor's current color depth.

Interactivity is what really sets Version 2.0 apart from the previous versions. Director can now control external devices; read and write to text files; call external routines; and incorporate features such as menus, fields and buttons in animations. All this and more is accomplished with Lingo, a language similar to HyperTalk. One-line scripts are associated with cast members (in creating on-screen images that the user can click on, for example) or frames (to allow a pause during animation, for example). Scripts longer than one line are called Macros, which are called from the scripts attached to cast members and frames. One annoyance is that Macros can be invalidated, or even deleted accidentally, by a feature intended to remove unused items from an animation.

Lingo supports XObjects, which are compiled code resources similar to external commands (XCMDs) and external functions (XFCNs) in HyperCard. A special XObject, called XCMDGlue, can play most HyperCard XCMDs and XFCNs. An XObject Developer Kit is available from MacroMind for those who want to write their own XObjects. Player, a utility provided with Director, can create stand-alone interactive programs from Director animations.

Users already familiar with both Director and HyperTalk will quickly grasp how to use Director 2.0. Those unfamiliar with Director and programming may find it intimidating at first, but it is worth the effort. The example files included are particularly

See Reviews in Brief, Page 45

Modem sharing: Shiva picks up the pace

NetModem V.32

Shiva Corp.
List price: $1,999

+ Allows an expensive high-speed modem to be shared over a network; offers modem pooling, busy-signal notification and on-screen status lights; software can be upgraded to V.42 and V.42bis.

− Confusing distribution of user software when more than one option is installed; poor error recovery on dial-in; still expensive when compared with other options.

By Jonathan Oski

Shiva Corp.'s new NetModem V.32 is an industry-standard high-speed modem that Macs and IBM PCs can share on an AppleTalk network. Sharing modems makes sense, because a modem is seldom used constantly by any individual. The NetModem V.32 also has a variety of other desirable network features.

As its name implies, the NetModem V.32 is a 9,600-bps, full-duplex modem. High-speed asynchronous modems have been available for a number of years, but most of them use proprietary transmission methods, so they can be used only to communicate with similar modems. The CCITT V.32 standard, which the NetModem V.32 adheres to, has grown popular during the past year and is used by products from many manufacturers.

What it does. The NetModem V.32 is intended to solve a number of common AppleTalk problems. First, like its predecessors, the NetModem V.32 can be shared. Once properly installed and configured, the NetModem V.32 functions as a locally attached modem.

Second, the NetModem V.32 creates a high-speed dial-in connection to an AppleTalk network. Remote users can dial a NetModem V.32 and make their Macintoshes fully integrated nodes on the network. This feature is also available with the NetModem V2400. However, we have found that using most AppleTalk services (such as file sharing, printing and electronic mail) at 2,400 bps is not practical.

The NetModem V.32 has a third capability not offered by its predecessors. When used with another NetModem V.32, it functions as a half bridge, like Shiva's TeleBridge and Infosphere Inc.'s Liaison. Half bridging makes transient links between distant AppleTalk networks (to accommodate applications that need to send or receive information to or from a separate network).

Plug 'n' play. Installing the NetModem V.32 is simple and uncomplicated. The three ports on the back of the unit are well-labeled. Unfortunately, the unit is not ventilated and Shiva recommends that the NetModem V.32 not be placed against other equipment. We view this as a design oversight. Networked modems and other data-communications equipment are often stacked on shelves in wiring closets where space is at a premium.

The NetModem V.32's power-on cycle takes about 15 seconds, during which the lights on the front panel of the NetModem flash. Once it's running, the device is immediately available to anyone on the network who has the user software. The NetModem V.32 and V2400 share the same client software, which is installed with Apple's familiar Installer application.

Changing the factory-set configuration of the NetModem V.32 requires the bundled Internet Manager application. Internet Manager is used to configure all of Shiva's AppleTalk products, so you need to copy only the files for the devices you own when you install the application.

For a NetModem V.32, the configuration options include naming the device, creating various access passwords, and specifying various levels of internetwork access when the unit is used as a half bridge or for remote dial-in.

Installing the NetModem software. Before using the NetModem V.32, an administrator must install software on each user's computer, including those at remote locations.

To use the NetModem V.32 as you would a normal modem, you first select it in the Chooser. This process will be second nature to anyone who is familiar with choosing printers or AppleShare-compatible servers. Depending on

See NetModem, Page 44

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Mar 27

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May 22

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Sep 25

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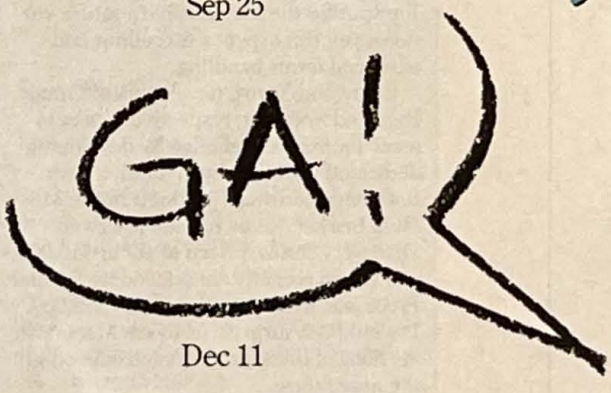
Oct 30

Nov 20



Dec 11

MacWEEK's been a ga-ga proponent of Macintosh graphic arts technology since day one. This year, MacWEEK's exclusive Graphic Arts report appears 18 times. Turn to GA to keep up-to-date on all aspects of graphic design and production as best-enhanced by the Mac.

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TopScan

From Page 42

in TopScan's proprietary format. By scanning only, as many as 500 pages an hour could be input, assuming enough hard disk space is available. (Under normal conditions, TopScan can scan and read about 180 pages an hour.) The CDP can then process these files unattended. Separate jobs need only be separated in the scanner hopper by blank pieces of paper to be saved as separate files.

Performance and quality. In our standard OCR test of a typewritten 20-page legal document, Accutext processed it in about 20 minutes. OmniPage 2.1 read the document in slightly less than 17 minutes. TopScan was done in six minutes and 15 seconds.

TopScan was the only product of the three to successfully deal with the line numbers in the test document, but it made dozens of mistakes in formatting, such as missing underlines, lower-casing capital letters, and inserting random spaces or tabs. Overall, the formatting that was retained was good.

In comparing performance on numerous other documents, we found TopScan to be consistently faster, usually two or three times more so than the others. This was also true with difficult documents in which OCR products with automatic font recognition slow down considerably. TopScan was also first in character-recognition accuracy, although OmniPage and Accutext were usually close behind and in a couple cases were marginally better.

For formatting accuracy, TopScan was also clearly superior. The others scrambled the formatting so much that we were left with the impression that it would have been easier to turn off format retention and add formatting by hand later. With straightforward formatting, such as is found in plain typewritten pages or books, all three did first-rate jobs. When the page was more complex, with graphic elements, captions, headlines, pull quotes and such, TopScan was the best at reproducing the original layout.

Conclusions. The current TopScan software needs considerably more work. During our evaluation, the installer did not work properly and the software crashed, although only when we pushed its limits in unexpected ways.

In contrast, OmniPage and Accutext are relatively polished examples of Mac software, but they have been presented with an imposing performance challenge by the TopScan/CDP combination. Before, they were the high-end Mac OCR solutions. Now, they are the slower, cheaper solutions for those who can't justify the cost of the best.

Calera Recognition Systems Inc. is located at 2500 Augustine Drive, Santa Clara, Calif. 95054; (408) 986-8006. □

Reading the future of OCR

Those who have had experience with the CDP machines attached to other computers will notice that TopScan for the Macintosh has left significant horsepower in the CDP untapped. Mark Kennedy, TopScan's product manager, readily admitted that Calera's programmers could not get adequate performance from all the CDP's features in time for the release of TopScan for the Macintosh. In future versions, you can expect a text editor and advanced forms handling.

Caere and Xerox, developers of OmniPage and Accutext, respectively, plan to meet TopScan's challenge by developing dedicated OCR hardware of their own. Both have hardware products in the MS-DOS market. Xerox has the Kurzweil Discovery series, priced at about $15,000, and Caere recently announced its Parallel Processor, to be priced at about $12,000. It would not surprise us to see Macintosh versions of these products introduced in the near future.

Of course, Calera also could offer a software-only OCR product for the Mac; and, according to the company, there are plans to do exactly that. As this went to press, Calera was planning to announce two Mac OCR software products, WordScan and WordScan Plus/Macintosh, priced at $595 and $995, respectively. These are expected to run on any Mac SE or better with at least 2 Mbytes of RAM. Using the same algorithms hard-wired into the CDP, they will include a text editor in addition to practically all the features found in TopScan. — *By Scott Beamer*

NetModem

From Page 42

the communications software, you may also have to use the Shiva Config Control Panel device (cdev) to specify which port (printer or modem) you would like the NetModem to emulate.

The telecommunications applications we tested (The Freesoft Co.'s White Knight 11.06, Dave Alverson's ZTerm 0.85, CompuServe Navigator and Software Ventures Corp.'s MicroPhone II 3.0) worked well using Shiva's serial redirection with either printer or modem port selected. However, Shiva has found that Freesoft's Red Ryder 9.4 and all versions of the communications module in Microsoft Works will work only if you specify modem port emulation.

Shiva has included a number of desirable features with the NetModem V.32 user software. The two that we found most attractive were modem pooling and busy notification. Modem pooling allows you to select multiple NetModem V.32's within a zone from the Chooser. When you start a communications application that requests access to a serial port (and hence a modem), you will be connected to the first available NetModem in your "pool." Busy notification tells you when all NetModems are in use and gives you the option of being told when one becomes free.

We would prefer the various NetModem functions offered through the Chooser document and Shiva Config to be combined into the Chooser document. This would make setting the options for a client less confusing.

Dialing into remote networks. Dial-in connectivity to an AppleTalk network through a NetModem V.32 is accomplished through a second cdev. The Network cdev allows you to switch from using the built-in LocalTalk network to Shiva's Dial-In Access. When you click on the Dial-In Access icon, you are presented with a list of sites to call, and you have the option to add others. Shiva supports a variety of modems for dialing into a NetModem and provides an application for creating new modem definitions.

Once you are connected to a remote network through a NetModem, you have access to any network services that would be available to you as a LAN user. At 9,600 bps, we found small file transfers as well as E-mail, network-management and screen-sharing applications to operate at an acceptable speed.

The NetModem V.32 also permits two networks to be connected. This configuration requires a NetModem on each network. In our tests, half-bridging performance over a full-duplex, 9600-bps connection was acceptable for less-demanding network operations. Still, large file transfers and multi-user database access should be confined to networks that are really LANs.

A quick read. The NetModem V.32 manual is very readable. It covers all you need to know to install, configure, use and troubleshoot the device. Those accustomed to the technical nature of most V.32 modem manuals may be surprised at the absence of detail about the modem, command set and registers. Shiva uses only S-registers 0 through 12 and 38; the company reserves 13 to 37 for future use. We found Shiva technical support to be knowledgeable and responsive to our problems. If help was not immediately available, our calls were returned within an hour.

See NetModem, next page

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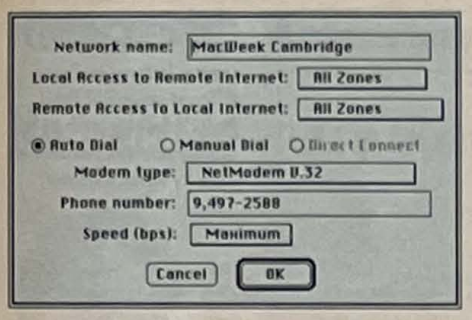
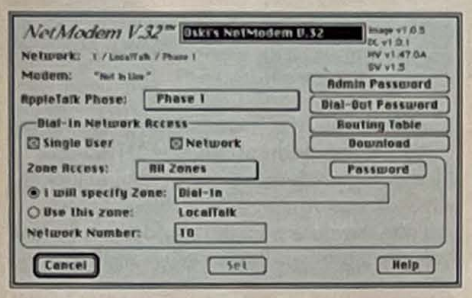


From this dialog box, remote network connections are configured by specifying the level of access, type of modem, phone number and transmission rate.



All NetModem configuration options are set from within Shiva's Internet Manager application.

NetModem

From previous page

Software problems. We experienced a number of problems while testing the NetModem V.32. While some of the problems may not have been caused by the product, some instabilities exist in the current software and need to be addressed before we can fully recommend this product.

We regularly experienced problems dialing into a remote network using a Microcom V.32 modem. These problems varied from spontaneous disconnections, which may have been due to line noise, to incomplete connections that caused the Mac to freeze. Shiva's only remedy for our problems to date has been to cycle the power on the NetModem V.32, a solution that is clearly unacceptable for remote users. At this time, the NetModem V.32 does not incorporate any error-correction or data-compression protocols, such as V.42, V.42bis or any of the Microcom Network Protocols. Shiva will address this deficiency with a future software upgrade, and we suspect that many connection problems we experienced will disappear at that time.

Conclusions. The NetModem V.32's features will appeal to users at various levels, depending on their application requirements. The NetModem V.32 integrates the network functions of modem sharing, network bridging and remote access. However, the NetModem's dial-in software is immature and caused some rather frustrating problems during testing.

When judging NetModem V.32's value as a network modem, you should note that very few on-line information services or bulletin-board systems offer 9,600-bps access. While this is certain to change, the cost of V.32 modems is certain to drop in the interim. Compared to other modem-sharing options, the NetModem V.32's ease of use may justify the added expense. If modem pooling, busy notification and status-light icons on the menu bar are not necessary in your environment, you may be better served by a $499 Shiva TeleBridge (see MacWEEK, June 20, 1989) and a standard V.32 modem. Such a combination could cost you $500 less than a NetModem V.32 and also provide modem sharing, modem pooling, busy notification, and dial-in and dial-out access.

Shiva Corp. is located at 155 Second St., Cambridge, Mass. 02141; (617) 864-8500. □

Reviews in Brief

From Page 42

helpful. The original manuals covering the Overview and Studio are joined by a new 328-page interactivity manual.

Interactivity and support for external routines make Director 2.0 much more than just an animation package and give real credence to MacroMind's claim of being *the* multimedia company. Director 2.0 lists for $695 and upgrades are $100.

MacroMind Inc. is located at 410 Townsend St., Suite 408, San Francisco, Calif. 94107; (415) 442-0200. — *By Michael D. Murie*

INITPicker 2.0

Not every category of Mac utility has a best program, one that simply outperforms and outclasses its competitors. But among utilities that manage Startup documents (INITs), Microseeds Publishing Inc.'s INITPicker is our pick as the front-runner. And with the newly released Version 2.0, it just got better.

INITs can be a serious source of problems on the Mac. Not all of them can coexist, and they're sensitive to the order in which they are executed. Before utilities like INITPicker, you had to turn INITs on and off by tediously dragging them in and out of the System folder and rebooting, and their order of execution could be changed only by renaming them.

INITPicker 2.0 lets you view a scrolling list of the INITs in your System folder, as well as the Control Panel devices (cdevs) and Chooser documents with INIT components. You can select which are active by simply double-clicking on them and you can change their loading order by sliding them around the list with a Maclike grabber hand.

INITPicker 2.0 adds two major new features, plus a lot of little enhancements. It now allows you to specify preconfigured sets of INITs (for instance, a "minimum" set and an "everything" set) that you can choose from at start-up time. And the program's new BombGuard mechanism helps resolve INIT conflicts: If your Mac crashes because of one, BombGuard isolates the offending INITs the next time you reboot, temporarily disabling them.

INITPicker 2.0 retails for $69. A free upgrade is available on request.

Microseeds Publishing Inc. is located at 7030-B W. Hillsborough Ave., Tampa, Fla. 33634; (813) 882-8635. — *By Dennis Klatzkin*

Super Fontina

Eastgate Systems Inc.'s Super Fontina offers a solution to long, scrolling font menus that takes quite a different approach from Adobe Systems Inc.'s Type Reunion (see MacWEEK, May 22). Rather than making the font menu shorter, it makes it wider, replacing the standard font menu with a multicolumn menu that fills most of the screen. With Super Fontina you can see more fonts at a time, without scrolling.

Super Fontina is a cdev. To install it, you simply drag it into the System folder and restart the Macintosh. The cdev lets you turn Super Fontina on and off and choose the font and font size that are used in the font lists. Choosing a 9-point font lets you display about 100 fonts on a 9-inch Mac screen. The true name of the selected font is displayed in a status line at the top of the menu. For example, if Palatino Bold is selected, the status line shows B Palatino Bold. If there is sufficient room, it is displayed twice, once using the System font and again using the font itself. (Only very long font names such as CLBI Helvetica Condensed Black Oblique run out of room.)

Super Fontina also tries to bring some order to the chaos of the font menu by grouping fonts from the same family together rather than alphabetically, so that B Palatino Bold is found next to Palatino instead of next to Bookman. However, some programs with non-standard font menus require the traditional ordering; Microsoft Word 4.0 is a notable example. With these programs, Fontina displays the fonts in their normal order, but you still get the benefit of the larger menu. Or you can simply turn Fontina off before you launch Word.

We found some minor incompatibility problems with the $69.95 Super Fontina, although none were destructive. It simply didn't work with some applications, such as QuarkXPress 2.12, unfortunately. It is compatible with Fifth Generation Systems Inc.'s Suitcase II utility, but it needs to load after Suitcase.

Eastgate Systems Inc. can be reached at P.O. Box 1307, Cambridge, Mass. 02238; (617) 924-9044; (800) 562-1638. — *By Bruce Fraser*

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REVIEWS

Utility collection falls short

Now Utilities draws from shareware world

Now Utilities

Now Software Inc.
List price: $149

+ Brings several useful utilities from the shareware world into commercial distribution, improving availability and technical support.

− Doesn't offer new levels of functionality beyond what is available in similar products; some utilities borrow heavily from other products' user interfaces but aren't as good.

By Dennis Klatzkin

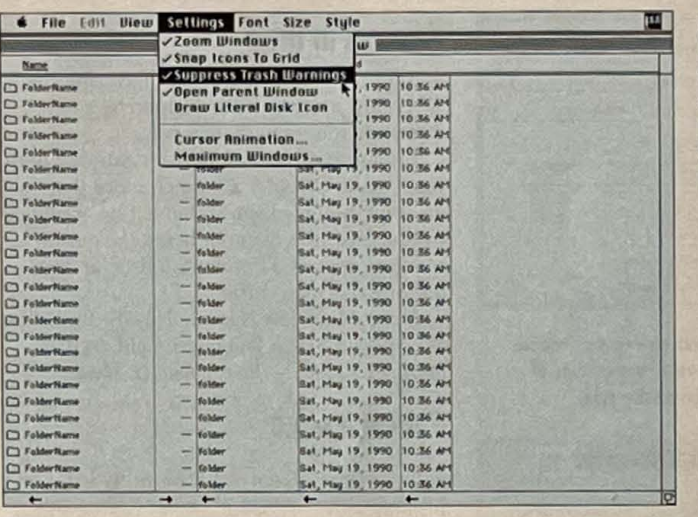
Collections of Macintosh utilities have been around almost as long as the Mac itself, though there seems to be renewed interest in the genre. Considering the popularity today of operating system enhancements, generally Startup documents (INITs) and Control Panel documents (cdevs), it's no wonder that several publishers are venturing into the arena. Unfortunately, the first of this new crop of utility sets we looked at leaves a lot of room for criticism and only limited room for praise.

Now Software Inc., formerly known as SmethersBarnes, recently began shipping Now Utilities 1.0, a set of a dozen utility doohickeys, most of which are INITs and cdevs. Parts of this collection are programs once offered as shareware; other parts are newly authored but uncomfortably familiar anyway.

NowMenus and InstantAccess. The best-known of Now Utilities' shareware ports is Jörg Brown's hierDA (also known as DA Menuz), retitled NowMenus. It's a useful program that performs a combination of functions. You can pop up a hierarchical minilist of the current menu bar items anywhere on screen, you can access the menus of almost any desk accessory as hierarchical entries under the Apple menu, and you can select cdevs from a hierarchical list associated with the Control Panel DA entry.

The first feature is primarily of interest to users with large-screen or multiple monitors, while the second is of value with only a few DAs. NowMenus' capability to help organize cdevs under the Apple menu is the feature we found most useful. No longer do you have to scroll through a dizzying display of icons in the Control Panel to enable your RAM cache, access INITPicker or adjust SuperClock. You can simply choose the cdev you want when you select Control Panel from the Apple menu.

InstantAccess is a reincarnation of a shareware utility by Jon Gotow, once called DFaultD. It bears some similarity in function to Hiroaki Yamamoto's shareware favorite, Boomerang, and Aladdin Systems Inc.'s ShortCut. Although InstantAccess isn't as full-featured or appealing as those two, it has at least one unique aspect: It lets you define which folder will become the default folder within any application or DA. You can even define different sets of default folders and switch between them easily.



Like the freeware program Layout, Now Utilities' Customizer lets you configure different aspects of the Finder's desktop, such as the spacing between elements in View by Name windows.

Déjà vu. Some of the "new" parts of Now Utilities borrow heavily (and brazenly) from other products. Customizer is virtually a clone of Michael C. O'Connor's freeware program Layout, which lets you configure certain aspects of the Finder's desktop. However, Customizer lacks some of Layout's finer features, such as color controls.

Startup Manager is a utility for controlling INITs. It has a user interface that is very similar to Microseeds Publishing Inc.'s INITPicker, but Startup Manager is only a pale imitation, and unlike INITPicker, it reorders the loading of INITs by renaming them with consecutive numbers before their names. We found this method particularly insidious because many INITs and cdevs won't function if they are renamed in any way.

Now Utilities contains a few other programs that are of limited interest. AlarmsClock places the time of day on your menu bar, lets you set multiple alarms, and optionally flashes a message when an alarm goes off. DeskPicture allows you to substitute a PICT graphic for the Mac's normal desktop pattern.

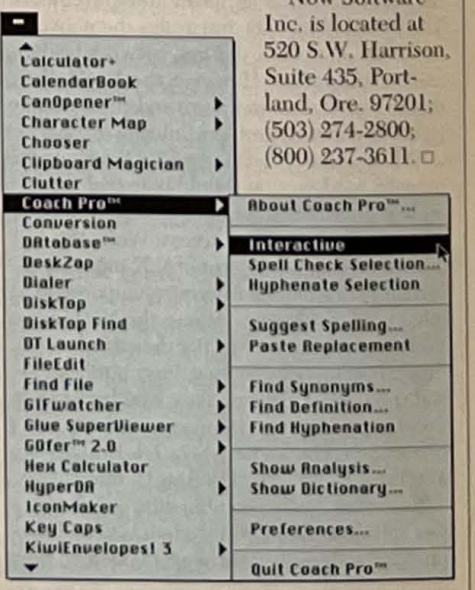
Persistence cleans up the way INIT and cdev icons parade across the bottom of the screen at start-up time, Print Previewer lets you preview on-screen the way documents will look when printed, Profiler offers useful information about your Mac's configuration, and WYSIWYG Menus modifies font menus to show actual fonts instead of the Chicago font.

Is it suite enough? We found Now Software's choices for this anthology disappointing. Only NowMenus offers functionality you won't find in competing products; the rest are pedestrian, imitative utilities that don't quite match the quality of ones offered elsewhere as commercial, freeware or shareware products.

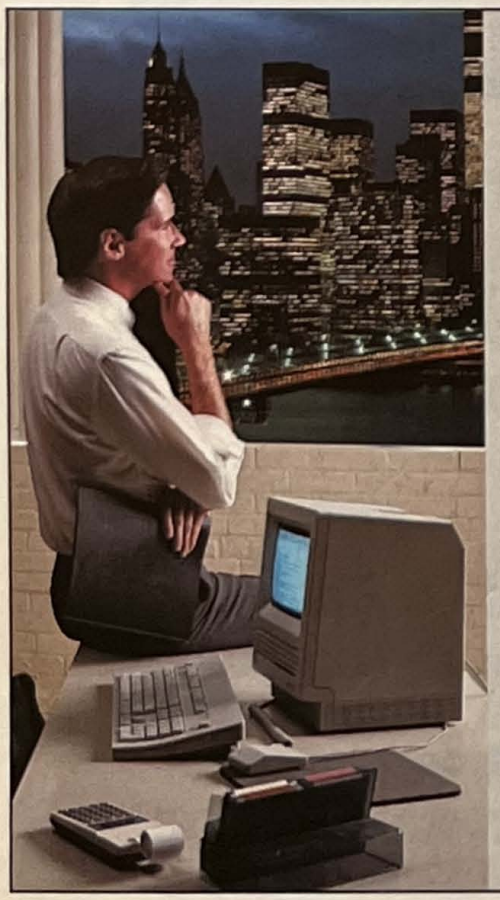
But Now Utilities does deliver a few benefits, especially of interest to business users, that may not be immediately apparent. By bringing utilities from the world of shareware distribution (via computer bulletin boards, on-line information services and users groups) into standard commercial distribution, Now Software has widened the availability of these utilities to the non-techie public. In addition, the company offers high-quality documentation and technical support for its product, areas in which its shareware counterparts don't measure up.

Now Utilities is a moderately useful collection; it's just undistinguished. We think it needs at least one standout component, a program that's new and different with functionality not found elsewhere. We find it a bit pricey in light of what it delivers, but if you like NowMenus or can benefit from a few of the other offerings, it's not a bad deal.

Now Software Inc. is located at 520 S.W. Harrison, Suite 435, Portland, Ore. 97201; (503) 274-2800; (800) 237-3611. □



Among other features, NowMenus lets you access the menus of most DAs as hierarchical entries under the Apple menu.



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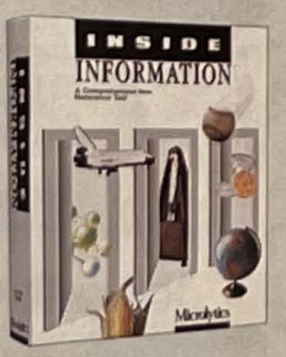

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Help Desk

No need to worry about 'head parking'

I'm confused about "head parking" on my hard disks. What exactly is head parking? Do my disks do it automatically, or do I need to run a utility to park the heads before I shut down?

BY DAVID RAMSEY

Before we talk about head parking, you need to understand about the two types of head-positioning mechanisms in hard drives.

The first, and until recently, most common sort is the stepper motor. This is a DC electric motor that rotates a small, fixed increment every time a pulse of electricity is applied. To move the head across three tracks, for example, three pulses are applied to the stepper motor.

The second type of head is the voice coil. The name has been borrowed from a similar construct first used in loudspeakers. Basically (and I can imagine the disk engineers in the audience cringing at this oversimplification), it's an open-ended solenoid whose "piston" moves a precise distance depending on the voltage applied to the coil. To move a head to a specific track, a specific voltage is applied to the coil, and the head moves there instantly.

Stepping it up. Voice-coil mechanisms are much faster than stepper motors, but they also cost more. Typically, stepper motor actuators are seen on drives with capacities of 30 Mbytes or less that have average access times in the 50- to 80-millisecond range. Voice-coil drives, on the other hand, can have average access times as low as 15 milliseconds.

Stepper motor drives have so much mechanical inertia in their mechanisms that the carriage mechanism doesn't move easily; thus, head parking isn't needed.

(Historical note: While floppy drives today always use stepper motors, old-timers might remember a now-defunct company called Persci that made 8-inch, high-performance voice-coil floppy drives. In the days before cheap hard disks, this was the storage system to have — if you could afford it.)

When running, the head of a hard disk is supported by a thin air cushion created by the flow of air over the spinning platter. When the drive stops spinning, the head lands on the disk surface. A few years ago, when most hard disks used soft ferric-oxide media (making the disk surface brown, like magnetic tape), this landing could actually damage the disk surface. So a place on the disk — typically the last or innermost track — was dedicated as a "landing zone," and no data was written there. The head was automatically moved to the landing zone when the drive was turned off. In some drives, the heads were supported by mechanical lifters and were never allowed to touch the disks. In either case, the activity of the heads when the drives were turned off was referred to as parking.

Plated media. Today, virtually all drives use "plated media." The disk surface is coated with a pure metal covering instead of the softer metal oxide. This coating causes the disk platter to look like a mirror. One of the big advantages of plated media is that it's very hard. A drive head landing on it doesn't hurt it, and the media is lubricated so the head isn't damaged either. No drives I know of, except the various removable cartridge mechanisms made by Syquest and Bernoulli, use head lifters anymore.

Voice-coil drives still need head parking, though, even if they use plated media. This is because the head and carriage assembly can move freely when there's no electrical current being supplied to the voice-coil mechanism. Moving the drive when it's turned off can damage the carriage assembly as it slides around and bangs into the stops. These days, all voice-coil drives automatically park their heads when they power down.

So the final answer is: If your hard disks were made in the past five years or so, they have automatic head parking built in, or they don't need it. So don't worry about it. □

Please send questions to David Ramsey on CompuServe: 76702,335 or to Help Desk, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105.

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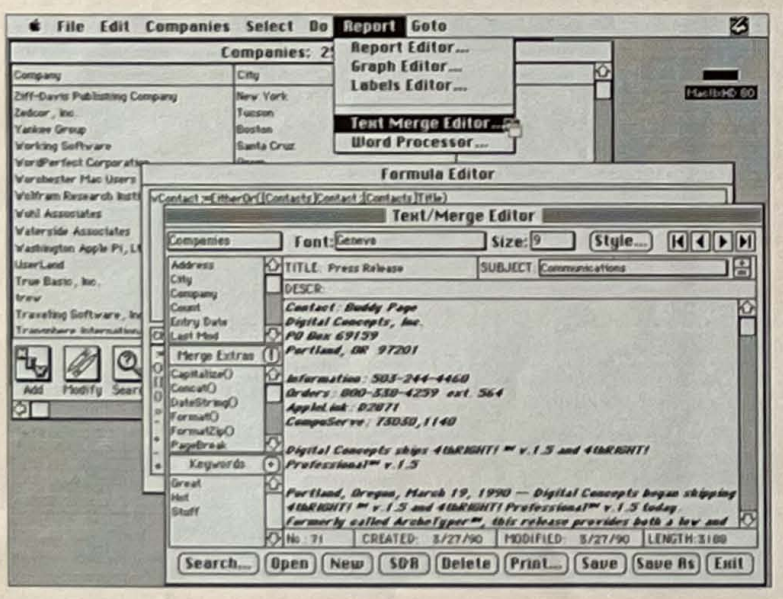

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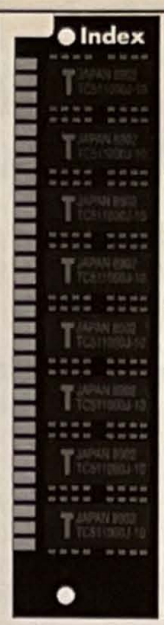

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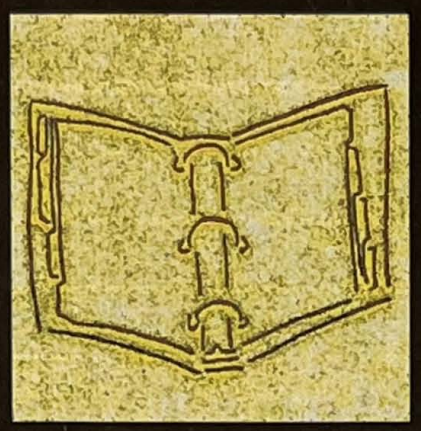

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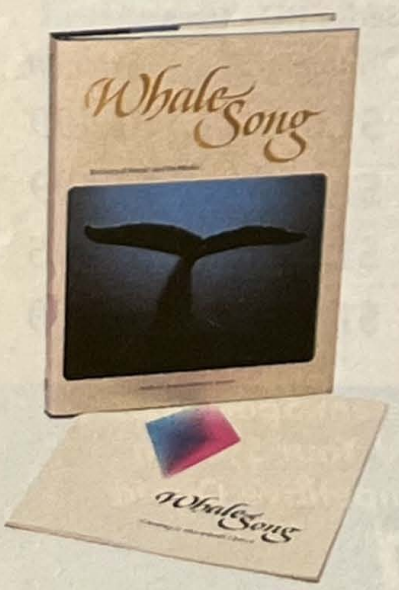

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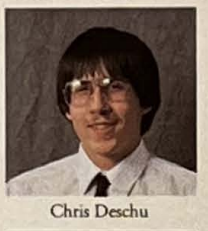
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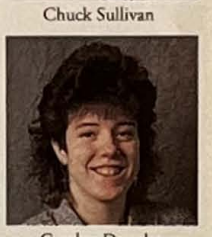
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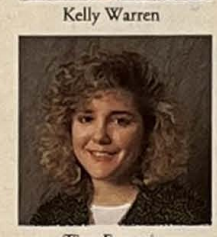
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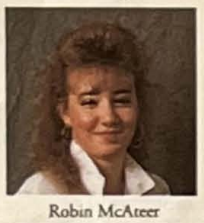
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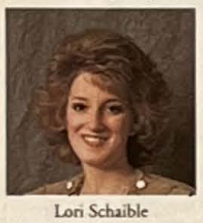
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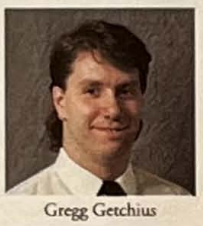
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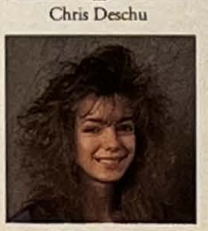
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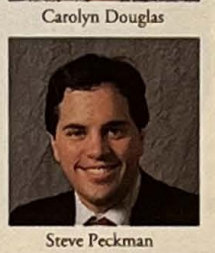
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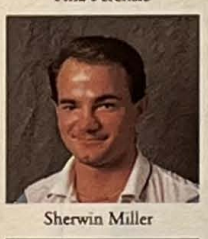
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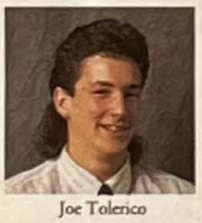
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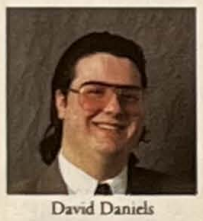
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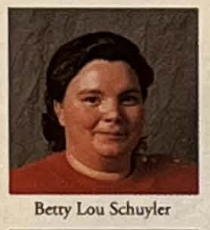
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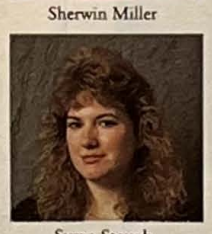
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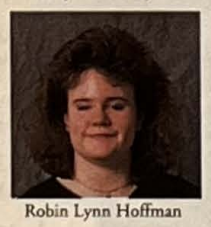
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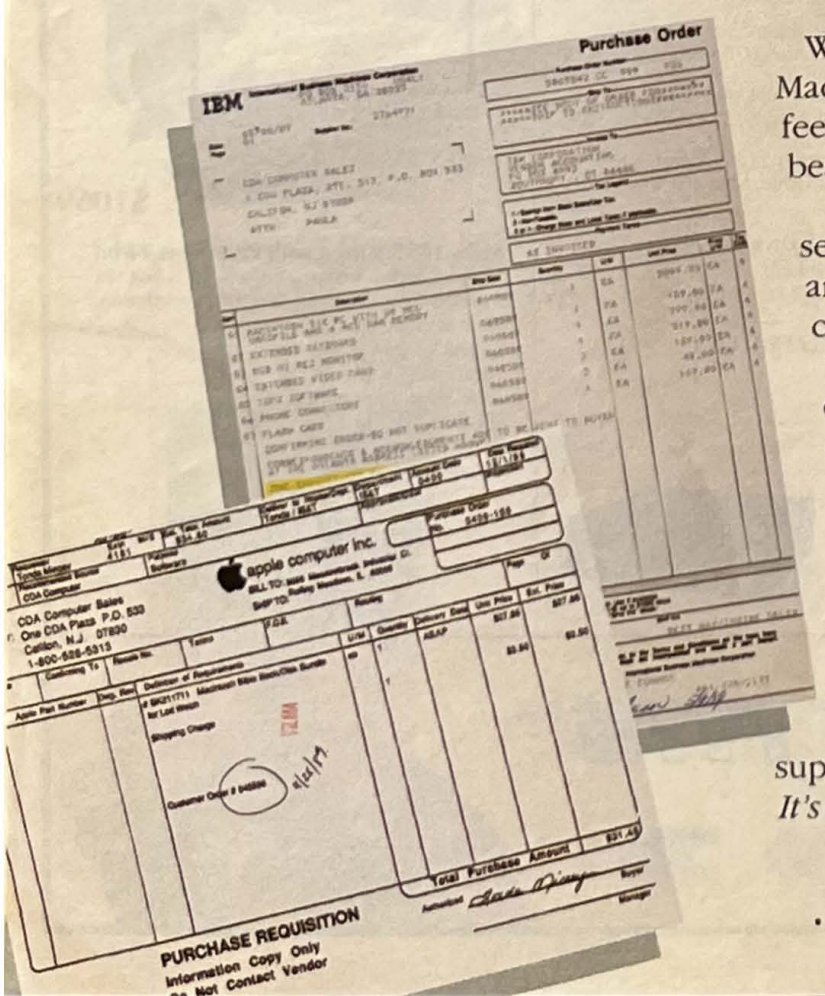

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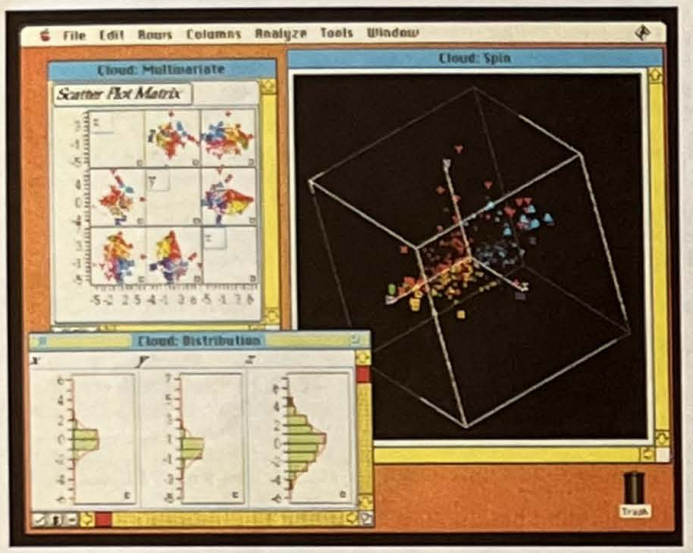

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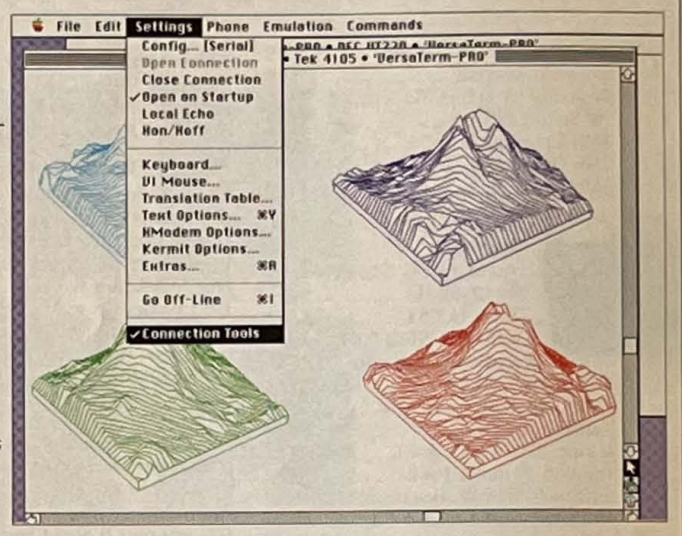

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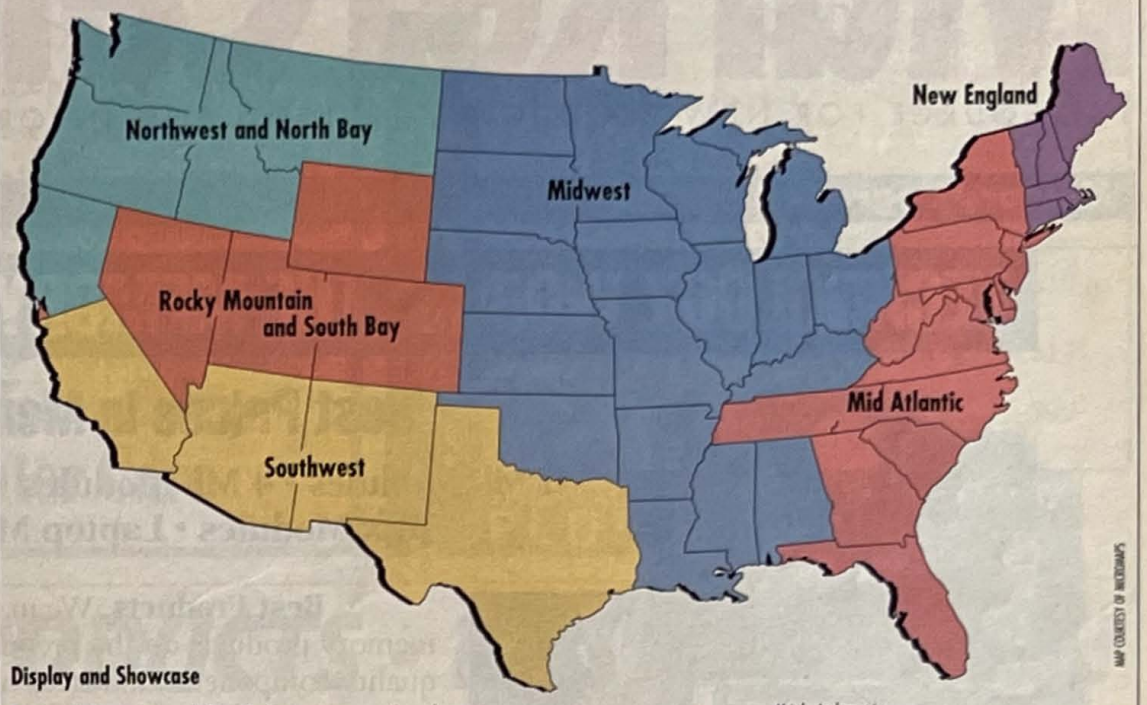

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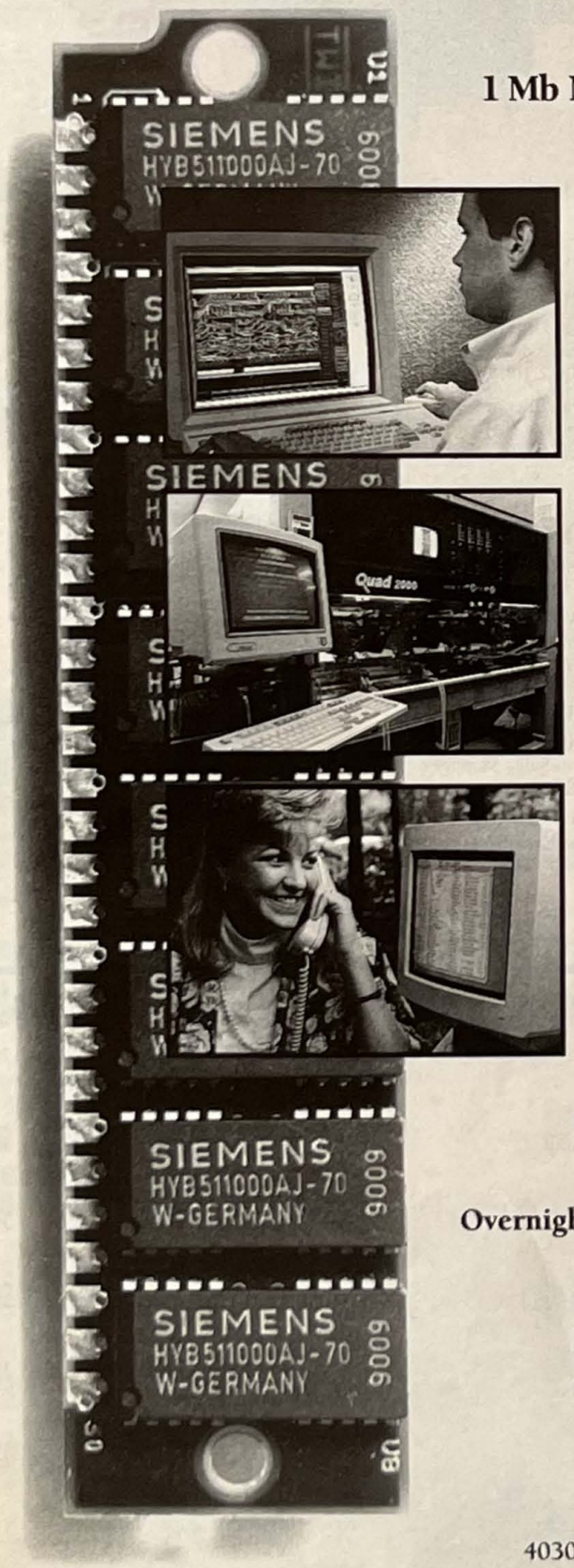

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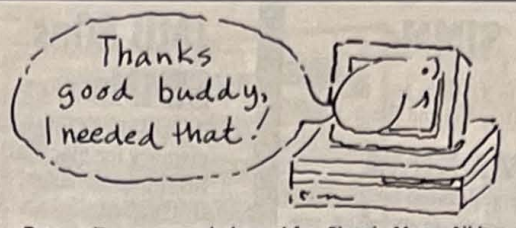

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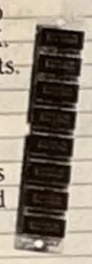

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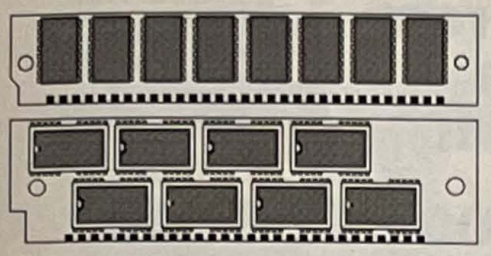

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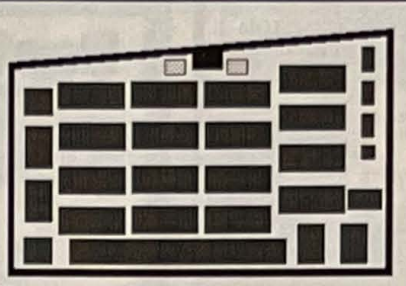

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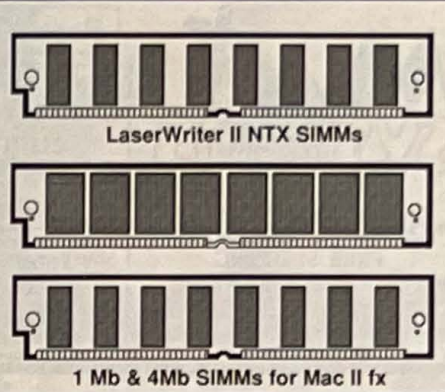

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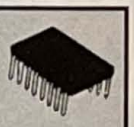

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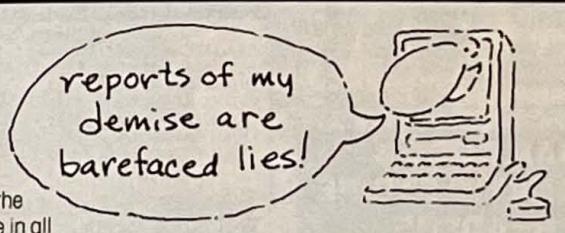

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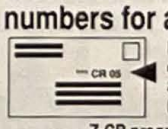

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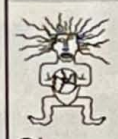

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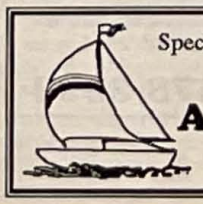

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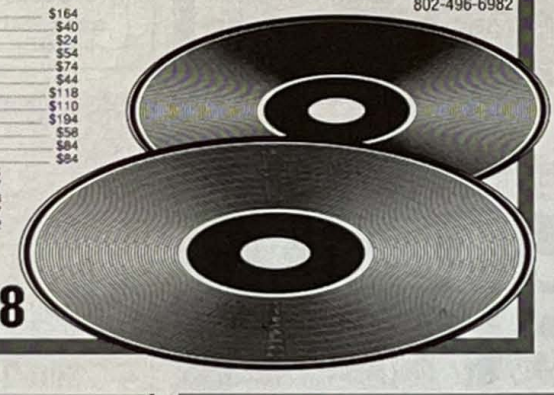

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HARRY BALDWIN

With the commercial success of DiskTop, QuicKeys and QuickMail, Don Brown, John Kirk and Dick Skeie (left to right) have seen CE Software grow into a full-fledged public company.

CE Software: Long road from attic to corporate boardroom

INDUSTRY PROFILE

By John Battelle

West Des Moines, Iowa — Next to CE Software Inc.'s offices here is a wooded creek bed that, according to company President Dick Skeie, lures deer, fox and other creatures to its banks. Across the creek is an open field. You can't see it, he continues, but it's the site of the new building.

Ground was broken in May, just two months after CE Software was taken public in a blind-pool merger. For Skeie and his partners, the new corporate headquarters are the payoff on a gamble they took more than nine years ago.

In 1980, Skeie ran Computer Emporium, a successful computer retail outlet. His customers often needed custom programming, and to satisfy those needs Skeie contracted out to a student at nearby Drake University. Before long, Skeie realized he had found a valuable asset in Don Brown.

"We told him that once he graduated, we would build a company around him," Skeie said. In 1981, Brown started working full time out of the attic above Computer Emporium. Brown's Apple II game series called Sword Thrust was CE Software's first commercial product and an immediate success. Busi-

See CE Software, next page

Battle continues over disputed MIT color patent

By Carolyn Said

San Jose, Calif. — Adobe Systems Inc. and Electronics for Imaging Inc. are continuing their dispute over a patent for color reproduction technology developed at the Massachusetts Institute of Technology, in Cambridge and exclusively licensed by EFI.

Claiming that both Adobe Photoshop and the color extensions incorporated in PostScript Level 2 infringe on the patent, EFI said last week that it plans to seek an injunction preventing distribution of both products.

Mountain View, Calif.-based Adobe filed suit on May 30 asking that the MIT patent be declared invalid and not infringed on by Adobe (see MacWEEK, June 5). Adobe said that was a pre-emptive move because EFI had threatened a suit of its own.

San Bruno, Calif.-based EFI, which is developing products for device-independent color based on the patent, had been negotiating a license agreement with Adobe, but it fell through. "They can't poach in our preserve without our consent," said Efi Arazi, EFI founder and president, adding that EFI is negotiating with other Mac developers whose products offer color functionality similar to Photoshop's.

Adobe contends that neither

See Adobe, next page

Consultants offer vendors feedback

By John Battelle

Bellevue, Wash. — Software testers beware: The Macintosh Consultants Network is gunning for your jobs. MCN last month announced the Vendor Product Awareness program, designed to create a channel of communication between vendors and consultants that benefits both parties as well as the users they support.

Under the VPA program, MCN members receive free copies of participating vendors' software. In return, they provide suggestions for new features based on their own perceptions as well as input from their customers, who range from small businesses to Fortune 500 companies.

"We're providing a way for our members and our vendor support-

See MCN, next page

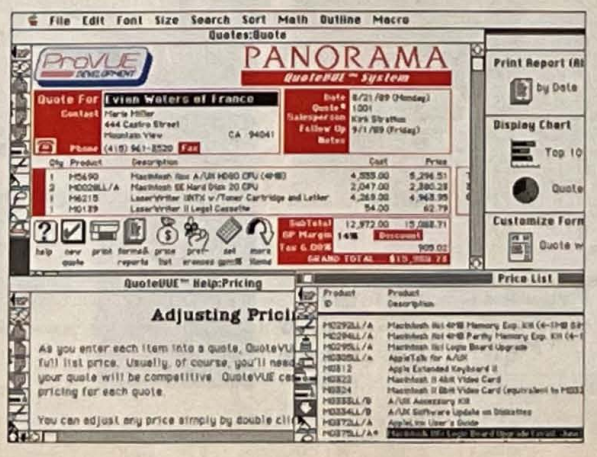
Quote package free to dealers

Huntington Beach, Calif. — Hoping to boost its own sales by helping dealers boost theirs, ProVUE Development Corp. last month released QuoteVUE, an automatic quote-preparation package based on its Panorama database package.

Available free to authorized Apple dealers, QuoteVUE includes a full working copy of the $395 Panorama, along with a template that takes advantage of the program's graphics capabilities, automatic look-up routines and keystroke-saving Clairvoyance feature to help sales representatives produce professional-looking quotes quickly and accurately.

The program automatically calculates taxes and totals, factoring in a user-specified gross profit margin and adjusting for non-taxable items and discounts. An Apple product price list is included, as well as a 35-minute video designed to help dealers learn and demonstrate Panorama.

QuoteVUE is available directly from ProVUE Development Corp., which is located at 15182 Transistor Lane, Huntington Beach, Calif. 92649; (714) 892-8199. □



QuoteVUE, a Panorama-based application that ProVUE Development is offering free to authorized Apple dealers, automatically checks a price list and calculates taxes and discounts to help sales personnel generate quick, accurate quotes.

Business BRIEFS

Crate Technology packs it in, but promises rebirth

North Hollywood, Calif. — Yet another Mac storage vendor has gone under, and once again some customers may be left holding the bag.

Crate Technology Inc. closed its doors at the end of April, after attempting in vain for nine months to reorganize under Chapter 11 protection. Chris Lemoine, president of the company, said Crate had overspent on trade shows and advertising. "Service is where we fell short," he said. "We now realize that word-of-mouth recommendations are more important."

A related Lemoine enterprise, Crate Metal Works, remains in business, and a new entity he recently formed, Data Storage Development Inc., is in the process of purchasing the bankrupt company's assets. The new organization will do business as Crate Technology, Lemoine said. "We want to do better with service this go 'round," he said, adding that the new company will honor the old one's warranties.

At least one Crate customer remains to be convinced. John DeSoi, a doctoral candidate in computer science at College Station, Texas, said he returned a 60-Mbyte Crate drive for repairs in August 1989 and still hasn't received the drive or a refund, despite repeated promises from Lemoine and the intervention of editors from MacWEEK and other publications. After Crate closed in April, DeSoi said, LeMoine first told him he could forget about the drive, then said he hoped to announce a solution soon. Lemoine last week did not respond to inquiries about the case.

Parent of LaserMaster acquires The Company

Eden Prairie, Minn. — Raster Devices Corp., parent company of LaserMaster Inc., a manufacturer of plain-paper typesetters and printer controllers, last week announced the acquisition of The Company, a Boston-based type and type-technology firm.

A new company resulting from the move, Digital Typeface Corp., will absorb The Company and continue its OEM business. The Company sells URW fonts as well as rendering and format-conversion tools for digital-font manufacturers.

DTC also plans to move aggressively into the retail font market. "We believe there is a market for an alternative source of Type 1 hinted fonts," said Ed Lippert, president of DTC. "We are going to compete with Bitstream and Adobe directly by releasing the entire URW library in Type 1 into the retail market," starting in late summer. The Font Company, an unrelated type house in Phoenix, also markets the URW library.

DTC will continue The Company's plans to create manufacturing tools for producing type in Apple's TrueType font format. Mike Parker, a 40-year veteran of the type industry and founder and director of The Company, will remain as typographic adviser to DTC.

SPA reports rise in software sales, though DTP continues to drop

Washington — "The industry slowdown experienced in 1989 is clearly over," said Ann Stephens, research director of the Software Publishers Association, as the trade group last month released its quarterly report on North American software sales.

Measured at retail, overall sales for the quarter were up 25.5 percent over the same period in 1989, to $993 million. Mac software sales climbed 37 percent to $136.5 million.

Sales of Mac desktop publishing software, however, dropped for the fourth consecutive quarter, this time declining 22.3 percent below the total for the same period a year ago. In the second, third and fourth quarters of last year, Mac DTP sales were off 6.7 percent, 37 percent and 20.4 percent, respectively, over comparable periods in 1988.

Apple revamps revised profit-sharing plan

Cupertino, Calif. — In response to rank-and-file discontent over changes announced in April to its employee profit-sharing plan, Apple said last month that it is modifying the new plan.

Instead of implementing the new program this quarter as previously planned, Apple will delay it until Sept. 30, providing employees with two more quarterly paybacks under the old formula. That plan is currently more lucrative to employees, since it ties payments to Apple profit margins, which remain healthy. The new plan is based on growth in sales, which has lagged in recent quarters.

Apple also said the new plan will be revised. As announced to employees in April, the program would have set a threshold of 10 percent quarterly growth in sales; if growth fell below that level, there were to be no payments. Since the company's sales grew by only 8 percent in the most recent quarter and are expected to stay around that level for the rest of the year, the plan might have eliminated all payments for the remainder of the year, in effect cutting employee salaries by 10 percent to 15 percent. Under the modified formula revealed last week, payments will be based on both growth and profits, and the growth threshold will be set at 5 percent per quarter.

Resolving another bone of contention, Apple said it will base executives' bonuses on a similar formula. □

CE Software

From previous page

ness and programmers tools for the Apple II followed, and CE Software became a stable subsidiary of Computer Emporium.

Then Apple shipped the Mac. Brown and John Kirk, owner of Computer Emporium, teamed with Skeie to take advantage of the new platform. "Many Apple II developers didn't make it over to the Mac," Skeie said. "We did because we focused on making entirely new products."

CE's first Mac products were offered on a shareware basis. The first, DA Mover, appeared in October 1984. A variety of other utilities soon followed, but Brown was still working in the attic.

"That was when we spun out CE Software," Skeie said. CE became a separate company in 1985 when Kirk sold Computer Emporium.

Starting in 1987, the company took its Mac software commercial. With the shipment of a commercial version of its popular Finder-enhancer, DiskTop, and then the QuicKeys macro utility, CE Software grew faster than Kirk could find space to accommodate the company.

CE moved out of the attic and into retail space next door. In February 1988, the company moved to its present address. Now with nearly 50 employees, CE has grown so rapidly that almost everyone has at least one office mate.

CE followed one software hit with another. In July 1988, it shipped QuickMail, which has become one of the Mac's leading electronic-mail packages. At that point, with eight years under its belt, a solid product line, and excellent managerial and programming talent, CE was beginning to look like a good investment.

This attracted another type of animal to CE Software's banks. The venture capitalists started calling Skeie.

Although he considered purchase offers from several companies, going public seemed to be the best option. Initial public offerings, however, are fraught with bureaucracy that can strangle a company's responsiveness. But one investor had an answer: a blind-pool merger.

A blind pool is a group of investors who have created a publicly traded company with the purpose of identifying ripe, high-flying start-ups and taking them public through a merger. The investors are essentially blind to which company's stock their dollars will eventually buy.

By merging, the blind pool's shareholders realize a gain, and the start-up gets a much-needed infusion of capital ($1.5 million in the case of CE, plus $3.2 million in warrants).

While illegal in some states for fear that those who run blind pools might take advantage of ingenuous investors, when practiced fairly the blind pool is an excellent system of funding companies, said Skeie.

"We wanted to expand and that meant we would need to be financed," he said. "The only way to make it viable was to make [CE] a liquid, freely traded company."

But going public meant new responsibilities for CE, such as compliance with the Securities and Exchange Commission's strict rules regarding disclosure of information.

Skeie, Kirk and Brown decided that the benefits far outweighed the drawbacks. Being a public company gives creditors a sense of security about a business, Kirk said, and allows CE to compensate and motivate its employees with stock plans.

CE merged with Anubis Corp., a Minnesota-based blind pool, which immediately changed its name to CE Software Holdings Inc. The board consists of Skeie, Kirk, Brown and two shareholders from Anubis.

Since the initial $1 per share merger, CE's stock, currently traded only in Minneapolis, has undergone a reverse split and is now hovering at $4, double its original price. Kirk and Skeie are busy preparing CE for a debut on NASDAQ.

But CE's coming out won't overshadow its roots in a computer store attic. It will move across the creek bed by November, but the stream will remain intact. Skeie wants to keep the animals coming. □

Adobe

From previous page

Photoshop nor PostScript Level 2 infringes on the MIT patent. "The patent covers using a system comprising a scanner, a computer with color monitor and a color printer," said Adobe attorney Roger Borovoy of Brown & Bain in Palo Alto, Calif. "Adobe doesn't make any of those."

However, EFI contends that since Adobe's software is designed to be used as part of a color reproduction system, it contributes to or induces infringement of the patent, according to EFI attorney Robert Koch. □

MCN

From previous page

ers to each gain value from the other," said Larry Barcot, executive director of MCN. "Vendors get highly qualified feedback on their products, and MCN consultants get to work with packages they might not otherwise be able to afford."

More than two dozen vendors are participating in the VPA program, including Microsoft Corp., Symantec Corp., Informix Inc. and CE Software Inc.

"Nothing is more gratifying than working with our primary marketing 'target,' the informed recommender," said Lee Lensky, director of Symantec's Utilities Group in Cupertino, Calif. "The VPA program gives us the ability to track the results of our support and gives us invaluable product feedback on a direct and timely basis."

"Vendors realize that no MCN consultant is going to risk a hard-won business reputation by recommending an unknown product," said MCN Director Kevin Doyle, president of Kevin J. Doyle Computer Systems in Salem, Mass.

MCN also announced shipment of an Ethernet tool kit, with everything needed to install Ethernet networks. The briefcase-size kit contains about 30 tools, including test meters, a butane soldering iron and a grounding strap. It is available now for $975.

MCN, which will hold its fifth International Conference in Snowbird, Utah, Oct. 7-10, can be reached at P.O. Box 309, Bellevue, Wash. 98009; (206) 453-2729. □

MarketWEEK

STOCKWATCH

Technology stocks fall in wake of Adobe announcement

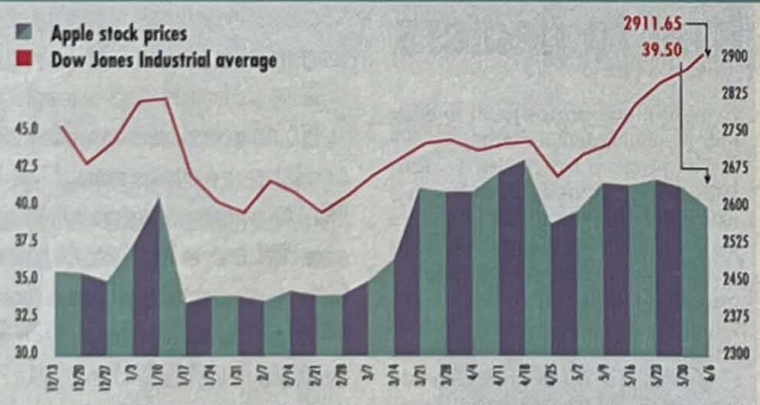
Repercussions from Adobe Systems Inc.'s recent earnings-related bomb continued to resonate throughout the technology arena last week.

Casualties of Adobe's announcement included Apple, which fell 4.53 percent; 3Com Corp., which dropped 5.26 percent; and Microsoft Corp., which fell 3.31 percent.

Adobe's widely publicized 4.59 percent drop followed reports that it anticipated lower-than-expected second-quarter earnings.

Businessland Inc., on the other hand, eased up 1.4 percent to $9.13. The retailer said it is expanding into Japan with the help of Canon, Fujitsu, Sony and Toshiba.

Motorola Inc. and Seagate Technology Inc. also did well, rising 1.83 percent to 83.50 and 0.84 percent to 15.



Mac-related stocks

	CLOSING 5/30/90	CLOSING 6/6/90	PERCENT CHANGE	P/E RATIO	ANNUAL HIGH	ANNUAL LOW
MAC-RELATED COMPANIES						
Adobe Systems Inc.	35.38	33.75	-4.59	20	50.75	14.00
Aldus Corp.	25.50	25.25	-0.98	22	28.25	12.25
Apple	**41.38**	**39.50**	**-4.53**	**10**	**50.38**	**31.88**
Ashton-Tate Corp.	12.13	11.75	-3.09	-7	22.75	8.75
Businessland Inc.	9.00	9.13	1.39	37	13.63	6.50
Microsoft Corp.	75.50	73.00	-3.31	35	78.75	25.63
Motorola Inc.	82.00	83.50	1.83	22	84.88	51.00
Seagate Technology Inc.	14.88	15.00	0.84	8	19.75	10.25
3Com Corp.	14.25	13.50	-5.26	18	20.75	10.00
INDUSTRY INDICATORS						
Digital Equipment Corp.	93.00	90.25	-2.96	17	103.38	69.50
IBM Corp.	120.88	120.88	0.00	18	122.13	93.38
Sun Microsystems Inc.	30.50	31.00	1.64	69	32.50	13.00

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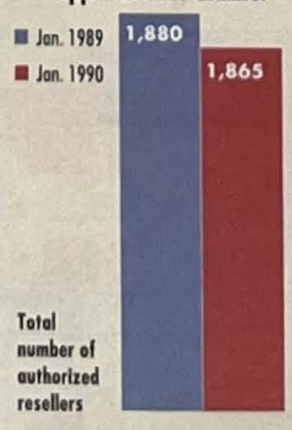
MARKETWATCH

Non-storefront resellers make appearance in Apple channel

The Apple Reseller Channel Survey by the Irvine Resource Group of Irvine, Calif., reveals a new trend in Apple's channel: the appearance of authorized non-storefront operations by resellers that do not support walk-in business.

From January 1989 to January 1990, the number of authorized non-storefronts has risen from zero to 21. These resellers provide complete Macintosh systems, including installation, service and sometimes training. They either buy computers directly from Apple or through an established dealer, in which case they are classified as dealer-supported value-added resellers, or DVARs. — *By Nathalie Welch*

The Apple reseller channel



	'89	'90
Authorized storefronts	1,852	1,751
Authorized non-storefronts	0	21
Macintosh hardware/software stores (no CPUs)	7	32
Others (mail order and services, repair, training, etc.)	21	61

Source: Irvine Resource Group

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Our line of real-time video products gives you amazing capabilities for the Macintosh® II family. But even more amazing, their compatibility with the way the Mac operates gives you endless ways to use them.

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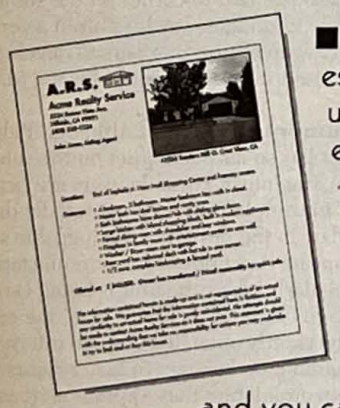
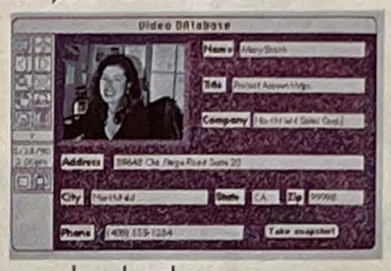


■ Create real estate sell sheets using a video camera and DigiVideo ◄ or DigiVideo Color. Just paste a shot of the property into your page layout program and you can print from the laser writer in 128 gray scales.

■ Keep a video database of employees with MicroTV and your database application. Shoot photos ► with a motion or still video camera, then grab the images with MicroTV and paste them into the database.

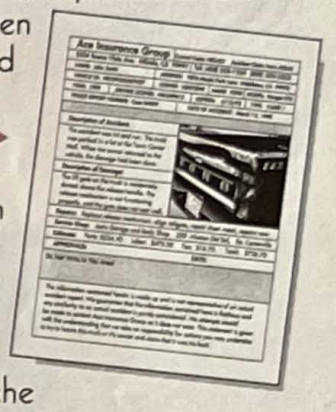


■ Watch the news or stock market report while you work on your Mac II. Just plug in cable or a standard antenna, and under MultiFinder, continue to use your application while ◄ running your TV program in the background.

■ Give your business presentations more impact by incorporating video or photo images. ► Using presentation software, you can create slides with frames taken from a corporate broadcast.

■ View a training tape while actually using the application you're trying to learn at the same ◄ time. MultiFinder and our boards make this possible.

■ Build one-piece insurance appraisal forms. Just take video photos of the damage, then capture and paste them into the ► computer-based claim form. Next you can print or send the completed forms electronically to the home office.



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A sleepy southern Comdex

Last week's Atlanta Comdex wasn't exactly teeming with new Macintosh product announcements, to put it kindly, but Mac the Knife never misses a chance to take a drive through the beautiful Georgia pines. Besides, there's something soothing about hearing the word "windows" pronounced with a soft southern accent.

On returning to the West Coast, the Knife found even more evidence that the hard disk market is getting to be a difficult place to make a buck. This week he reports that Apple is considering phasing out its external hard disk product line in the latter part of next year. In the meantime, insiders expect to see a major decline in shipments of Apple's external drives, although internal drive shipments are expected to increase.

Internal drive shipments are increasing partly because of the new 1-inch drives, primarily supplied by Connor Peripherals, that Apple has slated for use in several new products, including the upcoming compact Mac Plus and SE replacement. Sources tell the Knife that the 1-inchers are the only ones that will fit into the low-cost compact. The word is that the original plans didn't include provisions for an internal disk drive.

The Knife also reports that Apple has finally decided to come out with a new inkjet printer incorporating technology similar to that used by the Hewlett-Packard DeskWriter. Current plans call for the new printer to be announced sometime before summer next year.

Apple also is casting a lustful eye at the burgeoning market for large color displays for the Mac. The Knife's reliable sources claim that next March Apple will introduce a 21-inch, 75-MHz, 79-dpi color display designed to work with the recently announced 8•24 GC NuBus video card.

Peaceful ending? A settlement may be in the works that would end the more than two-year-long copyright-infringement lawsuit between Apple and Microsoft. A Knife informant whispered that Microsoft may have to pay up to $50 million to Apple later this month to settle the claim, which deals with 11 interface elements (including overlapping windows and some specific icons) that were not covered by the 1985 license agreement between the two parties.

Apple and Microsoft officials are close-lipped on the settlement negotiations, and the Knife is not totally convinced that a deal has gone down. But given that Microsoft has sold more than 100,000 copies of Windows 3.0, at least we know the cash is in the bank.

Human resources file. Every now and then the Knife stops tracking down new products to keep tabs on industry personnel, including the recently departed from Ashton-Tate. This week, he reports that Scott Wiener and Roy Harvey of FullWrite Professional fame have formed a new company, called Common Knowledge. Several new projects are under development, including an enabling technology, dubbed "communal space," for collaborative applications and a semi-intelligent personal information manager that incorporates a visual scripting language.

And then there's Guy Kawasaki, who has kept a relatively low (for him) profile since leaving ACIUS months ago. Although Kawasaki is hard to corner on the subject, reliable informants say he's hired a very small group of programmers to develop an integrated software package for the Mac.

Rumors of recalls. Although Ralph Nader has so far been quiet on the subject, some Macintosh Portable users are beginning to complain about a potentially damaging flaw in the design of the luggable's case. It appears that under some circumstances, particularly when the unit is being carried by itself (without the black bag), the case can inadvertently open, leaving the internals vulnerable to damage. In fact, rumors have begun circulating that Apple is seriously considering a General Motors-style recall to fix the defect. □

Who would have thought that in today's bull market for industry-insider information that a MacWEEK mug would retain its value better than one of the Donald's junk bonds? Don't miss out on the action. Call the Knife at (415) 243-3500 or MCI (MactheKnife).

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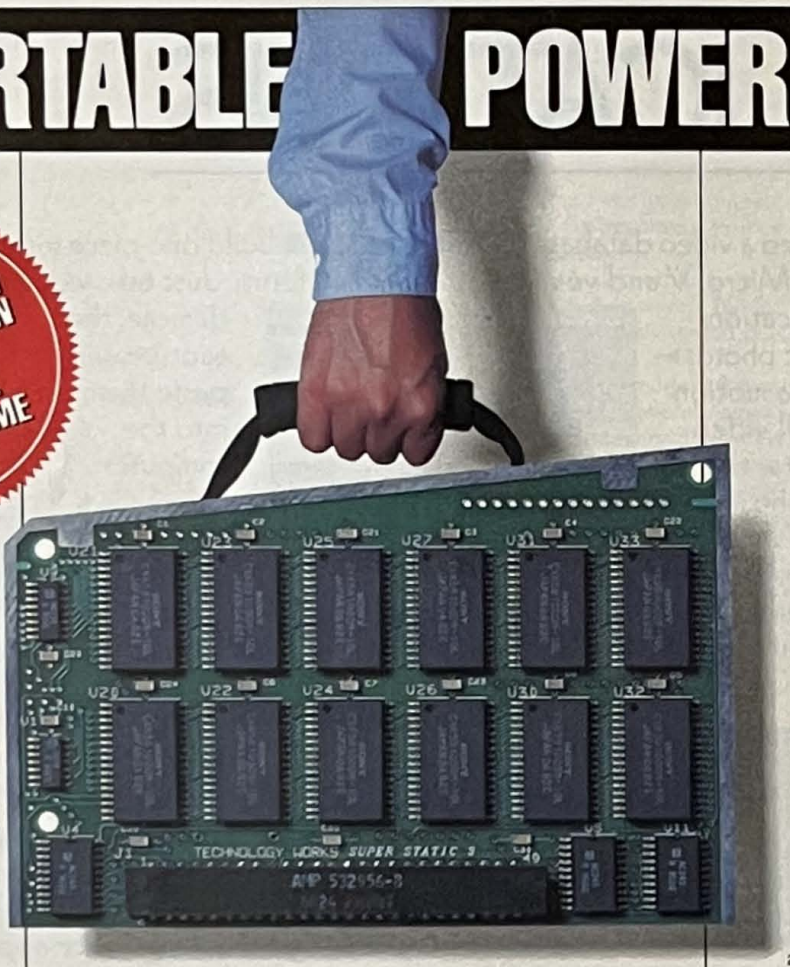

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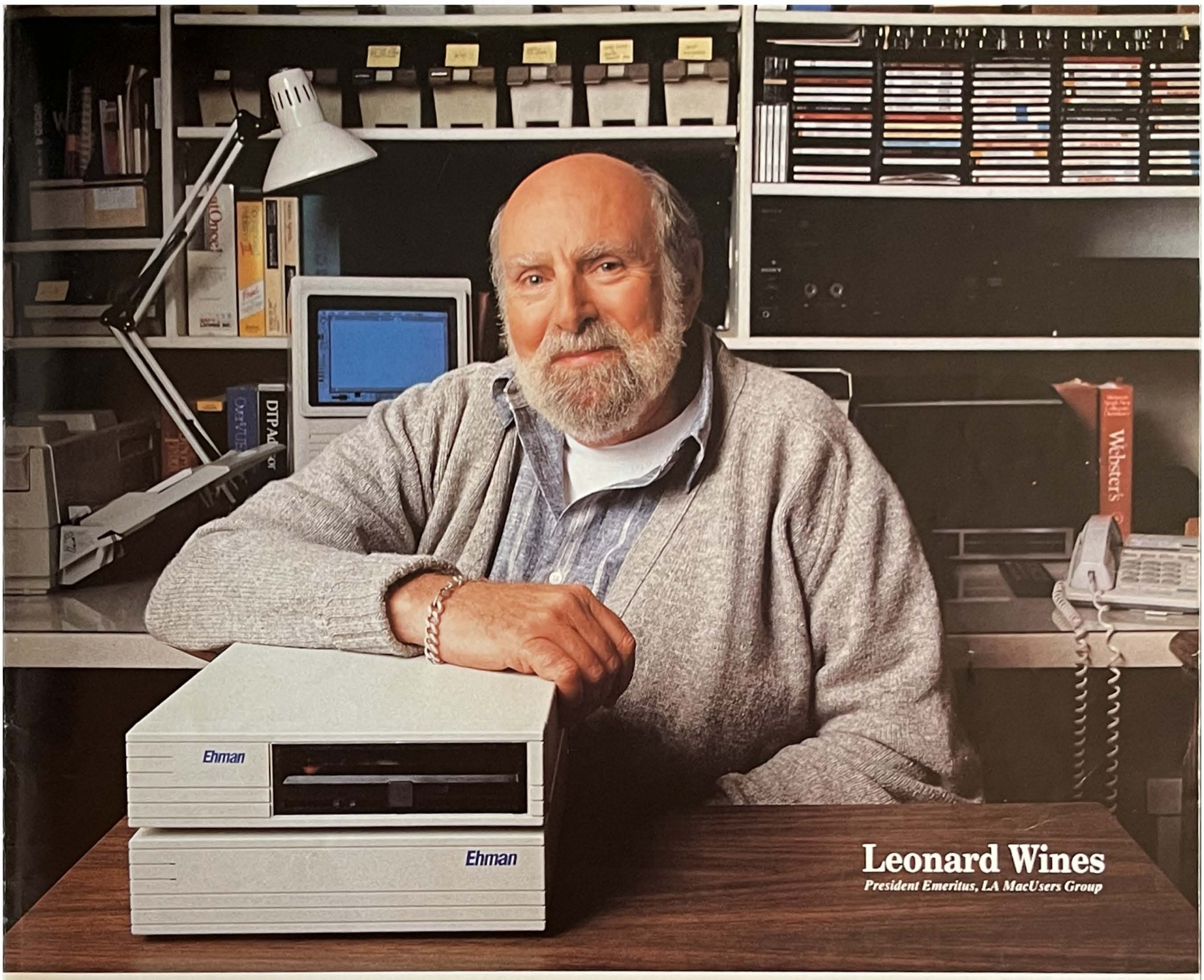

"The Price Speaks For Itself, But What People Really Don't Know Is How Good The Product Is."

Leonard Wines is a true Macintosh devotee and a respected expert. As the former President of the Los Angeles Macintosh Users Group he has hundreds of products come across his desk every year. And when people ask him what kind of hard drives to buy, he recommends Ehman.

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